

Antojitos

Ciao, Charlie This is the last issue of LAB NEWS for which Charlie Winter serves as senior reviewer. He's had that role ever since the early 70s when the old "editorial committee" was disbanded by Small Staff. (That committee, incidentally, grew in turn out of an early 50s "editorial board," which met to listen to LAB NEWS copy being read aloud to then-President Landry! Landry wanted to know how the stories would sound to the "average Sandian," says retiree Ted Sherwin, then supervisor of public relations.)



Charlie's first assignment as reviewer, per then-Executive VP Jack Howard, was to look for any weapon program origins of technologies described in the paper. That request stemmed from Gen. Dod Starbird's (then Assistant Administrator for National Security for ERDA) complaint that the LAB NEWS made Sandia look like anything but a weapons lab -- but, at the same time, we were not to talk about weapons as such!

With his 34.5 years of Sandia service and his long-time position as Director of Management Staff 400, Charlie is well qualified for his reviewer role. Again and again, it's his "cross-Labs" viewpoint that has helped us achieve a balance in our description of Labs programs and achievements. He's knowledgeable, self-effacing, a delight to work with -- and fast. He gets our copy late every other Friday afternoon and invariably has his comments ready first thing Monday morning. When I told him he could have his weekends free now, he replied, "Well, I'd read the LAB NEWS anyway so it hasn't been any burden."

Charlie, you're great! Thanks. And along with the rest of Sandia, I congratulate you on the "DOE Distinguished Associate Award" you picked up yesterday. We'll miss you.

* * *

Fitting Climax to a Productive Year Because of our Christmas cover, our "front page stories" today ended up on Page Three. Both stories result from outstanding work by the principals, both are preludes to future work that may well solve significant national problems, and, happily, both deal with Sandians who are getting the opportunity to push ahead with their efforts.

Congratulations, entrepreneur-to-be Bob Perry and Senior Fellow-to-be Gus Simmons! In each of your stories, we're looking forward to the next chapter. (And thanks to Ken Frazier, 3161, and Barry Schrader, 8302, for their help with the RAPRENOx story.)

* * *

Electrical Engineers, Take Note You'll want to celebrate the holidays with a pumpkin pie fabricated (as you would say) from the label of Libby's canned pumpkin. Among other ingredients, the recipe calls for, and I quote verbatim, "1 teaspoon grounded cinnamon."

That's the kind with the protruding wires. (Then there's the ad for "Gino's Greenspot" nursery, which has a special on, again I quote, "Douglas furs." Shameful, clubbing those poor little Douglasses just to keep someone who's rich warm too.)

* * *

Grammarians Celebrate Christmas Too In our sister division, 3161, Rod Geer mentioned that his little daughter was having some conceptual difficulties with the proliferation of Santa Clauses. Larry Perrine responded that he'd heard network personality Paul Harvey tell a story about a little girl who asked her English teacher mother, "How can there be so many Santas?" To which mom replied, "There's only one. All the rest are subordinate Clauses." And to which Ken Frazier responded, "I guess that makes the elves dependent Clauses." May the holidays bring you whatever you most desire. ●BH

* * *

Feliz Navidad y Próspero Año Nuevo!

Our Christmas Cover

Memories Of Children At Christmas Inspire Artist

This year's LAB NEWS Christmas cover is reproduced from an oil painting by Barbara Williams (wife of John, 2629; mother of Bonnie Hammond, 7865) titled "A New Mexico Welcome."

"The painting was started last spring as a possible Christmas card design," Barbara says. "The idea originated with memories of my children and their activities at Christmas." The children are all grown now.

Barbara has been drawing and painting since childhood. She studied art in high school and college, and has a BFA from UNM. After college, Barbara taught art to elementary school children in the Amarillo public school system. She gave lessons in her home in Albuquerque to both children and adults. During her teaching days, Barbara had exhibits of her work in several Albuquerque banks and government buildings.

Irises in spring are one of her favorite subjects these days, as well as scenes from the vacations she and her husband have taken to Ireland. She prefers oil, but does work in watercolor occasionally. Barbara's work also includes landscapes, family portraits, and still lifes.

"I don't paint as much anymore," she says. "I do some commission work and portraits of my family. I'm extremely flattered that my painting was chosen for the LAB NEWS cover."



COVER ARTIST BARBARA WILLIAMS working on the latest painting of her Irish vacation spot; landscape includes the hardy Irish horses of County Galway.

*Happy
Holidays
From the
LAB NEWS
Staff—*

*Bruce Hawkinson
Phyllis Wilson
Irene Dubicka
Bob Goetsch
Randy Montoya
Gerse Martinez
Janet Walerow
Shelly Barnes
Barry Schrader*

 LAB NEWS

Published Fortnightly on Fridays

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RAPRENOx: Important Implications for Combustion Technologies

Yesterday's edition of the renowned British journal *Nature* contained an article in which the authors conclude, "We have discovered a chemical means of removal of NOx from the products of combustion or industrial emissions, and we have demonstrated its feasibility on a portion of the exhaust from a diesel engine. This process has important implications for a wide spectrum of energy conversion technologies and for industrial applications that presently produce NO as exhaust by-products."

The authors, Bob Perry (8353) and Dennis Siebers (8362), are from Livermore's Combustion Research Facility (CRF), and "important implications" is precisely accurate: Two of the nation's primary atmospheric pollutants, smog and acid rain, may be reduced significantly if the discovery fulfills its early potential.

The discovery is a new chemical process for eliminating a major class of noxious pollutants, the nitrogen oxides (NOx), from exhaust gases. The process uses cyanuric acid [C₃N₃(OH)₃], a common, non-toxic chemical already in widespread use as a chlorine stabilizer in swimming pool water. Tests show the process converts the exhaust's NOx — the causes, or "progenitors," of smog — into molecular nitrogen and other gases.

NOx Reduced by 99 Percent

The new process is named RAPRENOx (RAPid REDuction of Nitrogen Oxides). In a series of laboratory tests on a portion of the exhaust from a small diesel engine, RAPRENOx has been shown to remove more than 99 percent of the NOx present. Pollution-control devices based on this invention would use a relatively inexpensive, non-toxic solid as the starting material.

Bob, a chemist, was studying some simple chemical reactions that could be important to pollution formation during combustion. Out of this work, for DOE's Office of Basic Energy Sciences, he began exploratory experiments in February 1985 to test the idea of reacting HNCO (isocyanic acid) with NO in exhaust gases.

"Once the results of these experiments were confirmed, I was really excited," Bob continues. "I don't remember all the people I shared the news with, but Bill McLean [8360], Mike Dyer, and Jim Boehmke [both 8362] were some of them."

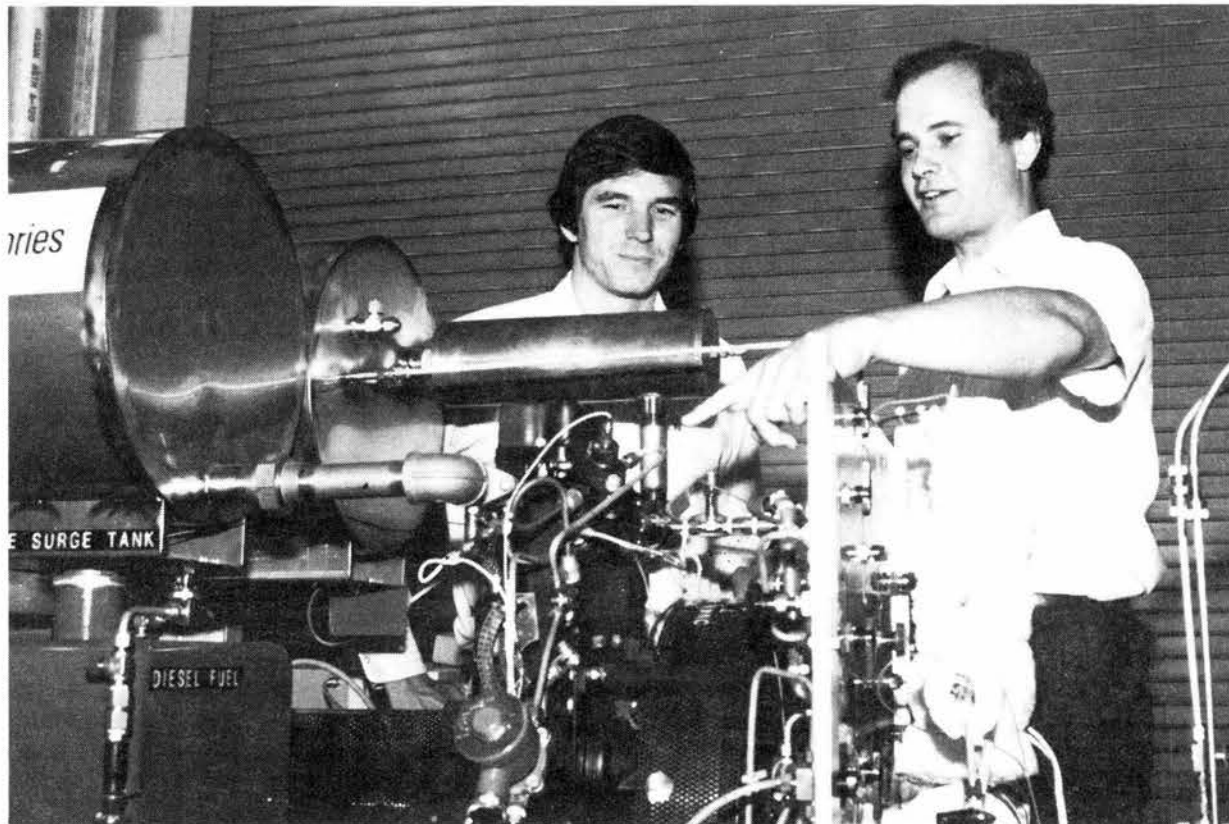
Shortly after that, Bob began working with Dennis to apply the process to the removal of NOx from the exhaust of a small diesel engine. This work was funded by the Energy Conversion and Utilization Technologies (ECUT) program of DOE's Office of Conservation and Renewable Energy.

"Potential applications for RAPRENOx range from diesel engines, where it is difficult to meet newly mandated federal particulate and NOx standards, to stationary power plants that burn coal," says Dan Hartley; until Nov. 1, Dan was Director of Combustion and Applied Research 8300; he's now VP of Energy Programs 6000.

"RAPRENOx may also have applications in various industrial processes," points out Peter Mattern, Director of Combustion and Applied Research 8300, "although those applications have not yet been demonstrated."

"Nitrogen oxides are major contributors to photochemical smog, and are directly implicated in the occurrence of acid rain, particularly in the western United States," explains Bob. "In fact, if you didn't have NOx, you wouldn't have photochemical smog." Bob and Dennis believe that the RAPRENOx process will be effective in a broad range of applications, and that it's inexpensive enough to make such uses practical.

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SANDIA RESEARCHERS Bob Perry (8353, left) and Dennis Siebers (8362) talk over their work on RAPRENOx in the diesel engine lab of the Combustion Research Facility.

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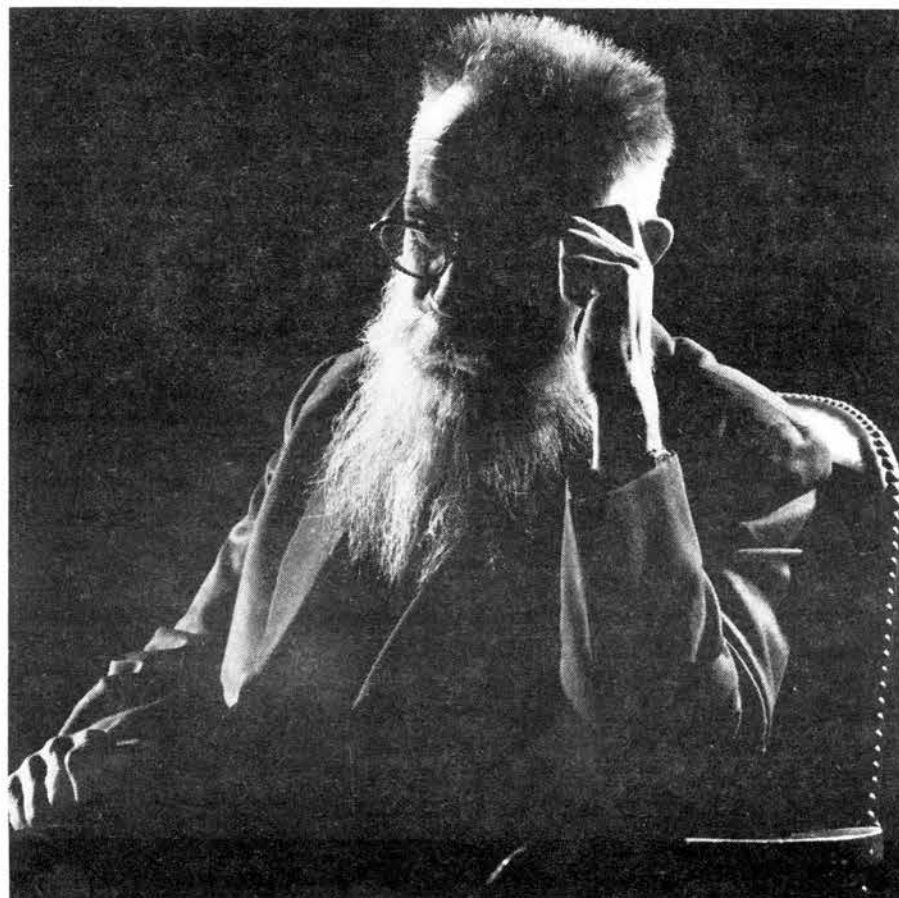
New Honor for Simmons

Senior Fellow Post Established

President Irwin Welber has announced the creation of a new and prestigious position, that of Senior Fellow, for MTS Sandians. The position was established "to recognize a very limited number of technical professional staff who have demonstrated con-

tinuing contributions of truly exceptional breadth, depth, and creativity in fields impacting the technical mission of the Labs," according to the Small Staff guidelines on the new post.

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IN A PENSIVE MOOD, Gus Simmons (1420) contemplates his new post as Sandia's first Senior Fellow.

Campus Technical Recruiting: Labs' Future Vitality Depends on It

Recruiting MTSs and technicians at schools across the country is exciting business: That's the message you get from everybody associated with the recruiting program at Sandia.

"Labs management recognizes the importance of recruiting the best and the brightest of students nationwide," says Marv Torneby, manager of Personnel Dept. 3530. "The recruiting program gets a lot of support and attention because management believes — and rightly so — that Sandia's future vitality and reputation as one of the country's leading R&D Labs depend on attracting talented, imaginative people who seek challenging and exciting work."

And so each year, Sandia recruiters fan out across the country looking for employment candidates who match Marv's description. They're looking for cream-of-the-crop types with high GPAs (grade point averages) who rank at or near the top of their respective classes. Labs recruiters don't come home empty-handed, either. "Our recruiting success is a well-known fact," says Mel Mefford (3531), who heads the Staff Recruiting and Employment Division. "Employment candidates recognize that Sandia would be a great place to work, especially when they come here to visit. Our job offer acceptance rate is very high — averaging about 70-75 percent for all staff classifications."

Sandia will search for 160 to 200 MTSs in FY

87, report Marv and Mel. Between 115 and 130 technicians will also be hired. The new recruits will fill job slots being vacated by employees who retire or leave the Labs for other reasons. "The hiring we do this fiscal year will not increase Sandia's total number of employees," says Marv. "Rather, it will keep us at or near the same number we have now."

Recruiting success depends on many factors, but a key one, according to Marv, is the enthusiasm of Labs recruiters. "They put in a lot of extra hours on their recruiting chores," he says, "and they do an excellent job of selling Sandia. They like what they do at the Labs, and appreciate the outstanding technical challenges and opportunities available to employees. That kind of an attitude is bound to rub off when you're talking to recruits."

'Tech on Tech' Approach

Sandia uses a "tech on tech" approach to recruit technical people. Members of the technical staff recruit PhD and BS/MS candidates, and technical support people recruit technical institute (TI) graduates. The SNL approach is effective, according to Mel, because recruits feel comfortable discussing their job aspirations with those knowledgeable about technical opportunities for growth, lab facilities, and support capabilities at the company for which they

may work someday.

"Our hosting organizations and recruiters also go out of their way to make employment candidates feel comfortable when they visit Sandia," says Mel. "Visitors get lots of personal attention. For example, they do not have to fend for themselves when they get to town; they're picked up at the airport and transported to their hotels. The next day someone picks them up, takes them to breakfast, and sees to it that they get to the Labs for interviews. These all seem like little things, but it's attention to detail that ensures recruiting success."

Interestingly enough, Sandia's job posting program (in the *Weekly Bulletin*) is another thing that attracts recruits, according to Mel. "The opportunity to move around in a company seems to be a definite plus," he comments.

The Technical Recruiting Advisory Committee, headed by VP Bill Brinkman (1000), is composed of director-level representatives from each VP organization. TRAC selects the schools where Sandia recruits (currently 61 schools for BS/MS candidates, 27 for PhDs, and 39 for technicians). The Committee — with its across-the-board Labs representation — also ensures that Sandia hires people in the "right" engineering and scientific disciplines — disciplines that will best support future needs of the Labs as changes occur. ● PW

Charged Academic Atmosphere

On the Recruiting Trail to Stanford University

You're aware of the beauty the minute you set foot on the campus of Stanford University. It's all around: the magnificent mission architecture, with its rounded stone arches and red tile roofs; the all-dominating Hoover Tower, housing memorabilia of Stanford grad and former U.S. President Herbert Hoover; the incredible chapel, reminding one of a European cathedral.

It's a pleasure to return to the Stanford campus a couple of times a year, according to alumnus Ben Blackwell (1553), Sandia's BS/MS recruiter there. Ben received his PhD in ME in 1973 from Stanford under the Labs' Doctoral Study Program. "Not only do I enjoy visiting Stanford and the Bay Area," says Ben, "but I also get a chance to see many of my former professors again."

It was also a pleasure for LAB NEWS to travel along with Ben to Stanford recently to find out what goes on during recruiting trips.

At Stanford, Ben's on the lookout for outstanding recruits — mostly at the MS level — in several engineering disciplines: mechanical, electrical, and aero. He's also looking for talented BS grads to fill slots in Sandia's One-Year-On-Campus (OYOC) and Specialized Engineering Development (SED) programs. (OYOC, a part of the Labs' Affirmative Action program, enables minority and female participants to obtain their master's degrees in an engineering or scientific discipline by attending school full-time the first year they're on-roll at Sandia. SED is a two-year program in which participants, selected on the basis of academic achievement, attend school half time and work half time while earning an MS in EE, computer science, or, occasionally, ME.)

Ben's been recruiting at SU for about six years. Since AT&T divestiture in 1984, he's been a member of the AT&T recruiting team that visits Stanford twice a year. Before, he recruited on his own for Sandia.

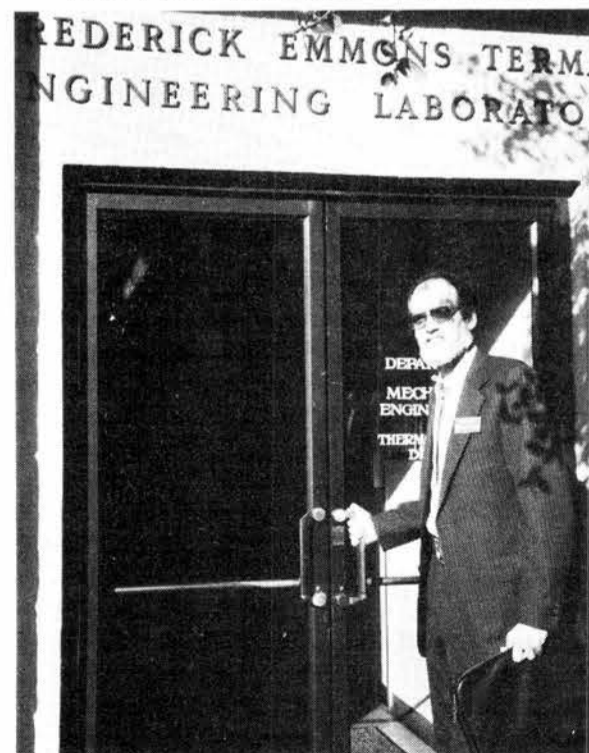
Before the AT&T team arrives on campus for student interviews, there's usually a pre-recruiting trip, about a month ahead of the visit and two weeks before interview sign-up sheets are circulated to students. Pre-recruiting often involves participation in a career fair sponsored by the school; the fair enables AT&T team members to meet and identify students most likely to meet hiring criteria, and to encourage them to sign up for interviews during the recruiting visit.

(Besides pre-recruiting contacts, recruiting visits are publicized in Stanford's daily newspaper ahead of time, so students can sign up to talk with representatives of companies in which they're interested.)

The night before they begin campus interviews, team members get together for a strategy session to discuss their hiring needs, the next day's schedule, and specifics about the school (for example, what grade point average [GPA] level is necessary for a student to be in the top 10 percent of prospective graduates, or what interview rules have been set by the school's placement office). Recruiters also review resumes — if they've been provided by the placement office — of students who have signed up for interviews.

A typical recruiting day at Stanford starts out early for a couple of reasons. "On-campus public parking is limited," says Ben. "Unless you're there before 8 a.m., you have a problem. And once you have a space," he adds, "you feed the meter lots of quarters — enough to take you through the day!"

After a quick breakfast at the Student Union,



BEN BLACKWELL (1553) takes time out to visit the ME Department and some of his former professors during a recruiting trip to Stanford University.

Ben heads for Stanford's Career Placement Center, where interviews with prospective employment candidates begin at 8:45 a.m. Before he starts the interviews, Ben checks a reference area at the Center where brochures from Sandia and other companies are filed for use by students; he replenishes the Labs supply if it's depleted. Next he reviews the sign-up sheet to see exactly when he'll be interviewing candidates.

Between 10 and 12 Interviews

"If that sign-up sheet is pretty much filled up," says Ben, "I talk to between 10 and 12 people a day." Interviews last only 30 minutes, including the time spent filling out necessary paperwork. If he doesn't have interviews lined up every half hour, Ben takes advantage of the extra time to visit faculty members in his old "stomping ground" — the ME Department.

After a lunch break at the campus coffee shop ("Can't leave that parking space — may not get another," mutters our intrepid recruiter), Ben takes time to read the Stanford daily paper to catch up on news of his alma mater. He sits on a bench near a fountain in front of the campus bookstore; that particular day, a UC-Berkeley bear is impaled on top of the fountain in honor of The Big Game coming up the following weekend.

Then it's back to the afternoon interviews. What does a Sandia recruiter look for during these sessions?

"Up front, we look at GPA," says Ben. "Sandia rarely considers candidates who don't have at least a 3.5 average or better. Then I look at candidates' ability to express themselves — how they communicate. And I try to make an honest assessment of how a person will fit in at Sandia. I ask myself 'Does he or she have the ability to compete?' Because, as you know," he smiles, "Sandia has a lot of top-notch people who thrive in a competitive atmosphere."

During an interview, Ben notes information about the candidate on a data sheet that will be used later at a meeting with other members of the AT&T recruiting team. Besides that all-important GPA, Ben asks about previous work experience, type of work preferred, and specialties and interests of the candi-

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date, including the desire for further schooling. If a candidate has definite druthers about geographic location, that's also noted. "We haven't had previous contact with MS candidates [as opposed to PhD candidates; see "Finding the Top"]," says Ben. "We don't know them ahead of time. So it's important to get as much information as possible during that 30-minute interview."

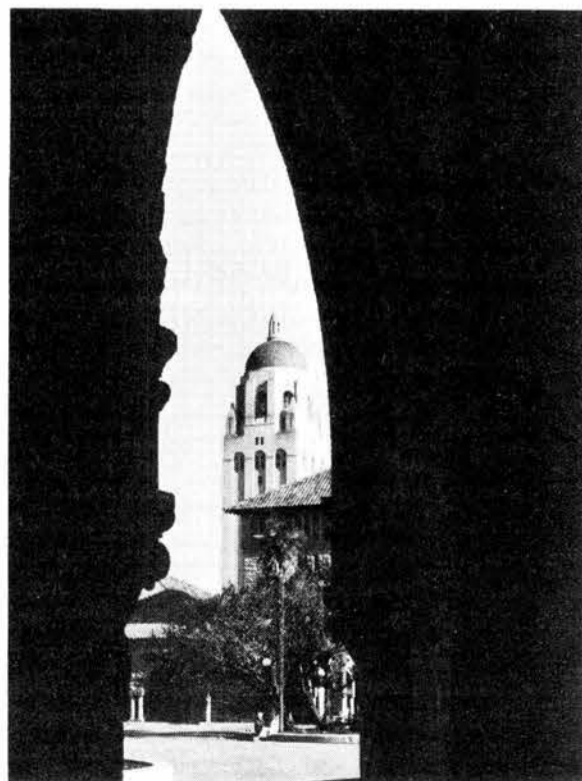
At 5:30 p.m., barely 45 minutes after completion of the last interview of the day, the AT&T team gets together for a post-interview meeting back at the headquarters hotel. Recruiters discuss the qualifications of each of the candidates they interviewed, along with other information they've obtained. Individual recruiters also assign overall ratings (Outstanding, Very Good, etc.) to people they've talked with. If Ben is interested in a candidate interviewed by someone else, he requests a copy of the candidate's data sheet so it can be reviewed by Personnel Dept. 3530 and circulated to Sandia line organizations that might have an interest.

He also may ask the team coordinator — in this case, Bill Jordan of Bell Labs — to arrange a CSI (Company Sales Interview) with a particularly promising candidate that someone else has interviewed. The CSI gives Ben a chance to verify information obtained in the earlier interview and determine that, indeed, there is a good match between the interviewee's capabilities and job opportunities at the Labs. If that's the case, he proceeds to "sell" Sandia to the candidate, and talks about work at the Labs that he or she might find especially exciting and challenging.

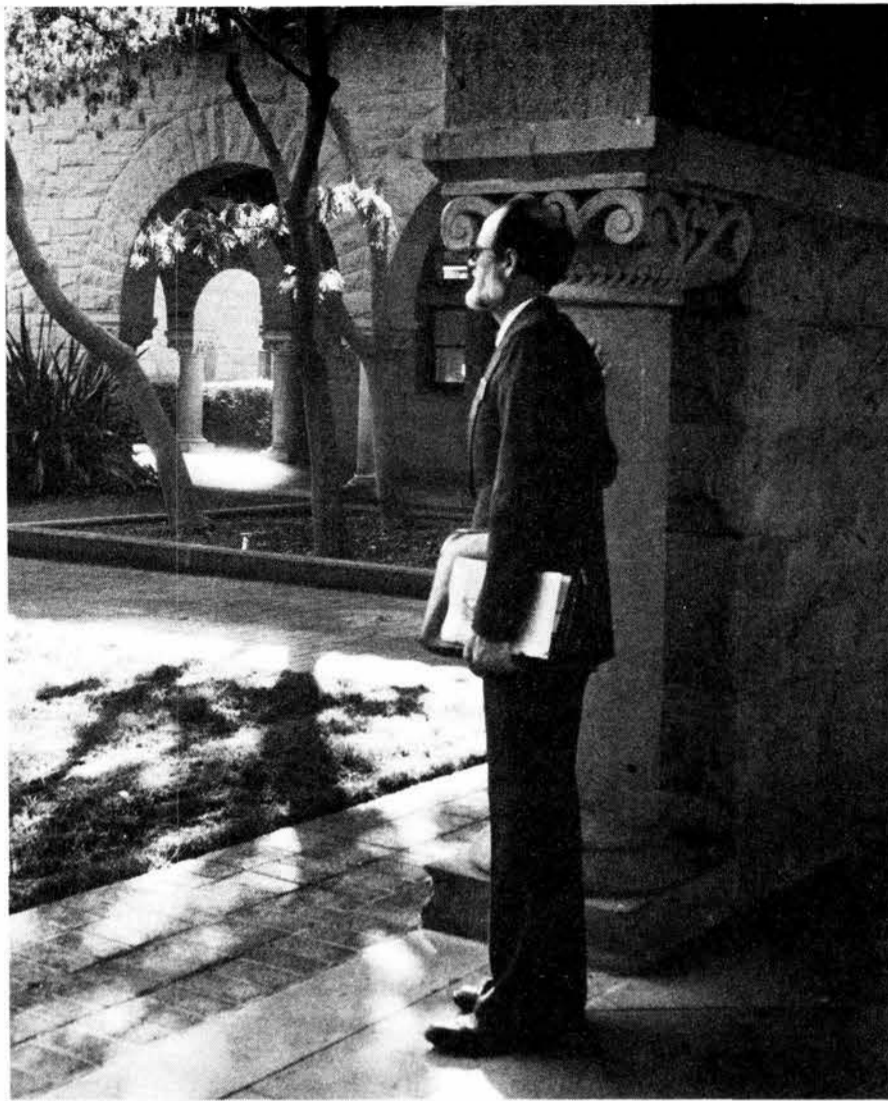
"The post-interview meeting gives us a good look at everyone who was interviewed during the day," says Ben. "So we go back home with information not only on the people that we ourselves talk to, but also on students interviewed by other AT&T recruiters. The team approach allows us to really maximize our efforts."

Recruiting trips usually mean two full days on campus, with the second day a carbon copy of the first — interviews, post-interview meeting, etc. A recruiter may extend the trip to three days if he or she has scheduled CSI interviews.

There's not much time to spare, but this LAB NEWS writer — on her first visit to Stanford — took a few minutes to sit back and watch. What's most memorable, even for a non-alum, is the almost electrically charged academic atmosphere about the place. Visitors are likely to take away other memories as well: campus pathways teeming with bicycles between classes, those wonderful old trees that fill the vast campus, snatches of conversations in many languages as students move from class to class, and, of course — those red tile roofs and stone arches!



HOOVER TOWER is a landmark at Stanford. Here, it's seen from a stone arch bordering the "quad" — an enclosed area surrounded by original campus buildings.



THINKING BACK to his student days? Perhaps, as Ben Blackwell (1553) contemplates one of the many courtyards on campus at Stanford.

Bring 'Em Back Alive!

Finding the Top PhDs and TI Grads

Sandia's campus technical recruiting program brings to the Labs each year new employees with varied backgrounds and different kinds of degrees — PhD, BS/MS, and TI (technical institute). LAB NEWS went along on a BS/MS recruiting trip to Stanford (see "On the Recruiting Trail . . .") and also interviewed PhD and TI recruiters to get some insight into how recruiting methods vary.

It's clear that Sandia recruiters, no matter what type of recruiting they do, are an enthusiastic bunch. They have to be: They do the job voluntarily — with approval of their management — and put in many extra hours preparing for recruiting visits and conducting them on campus. They like what they do, and they're good at it (see "Campus Technical Recruiting").

The recruiting job demands many Sandians, reports Marv Torneby (3530). PhD recruiters number 90, and visit schools in teams of two to eight people. Some 75 recruiters look for BS/MS candidates, and visit campuses as members of an AT&T team (see Stanford story). TI recruiters, 30 strong, operate individually at schools to which they've been assigned.

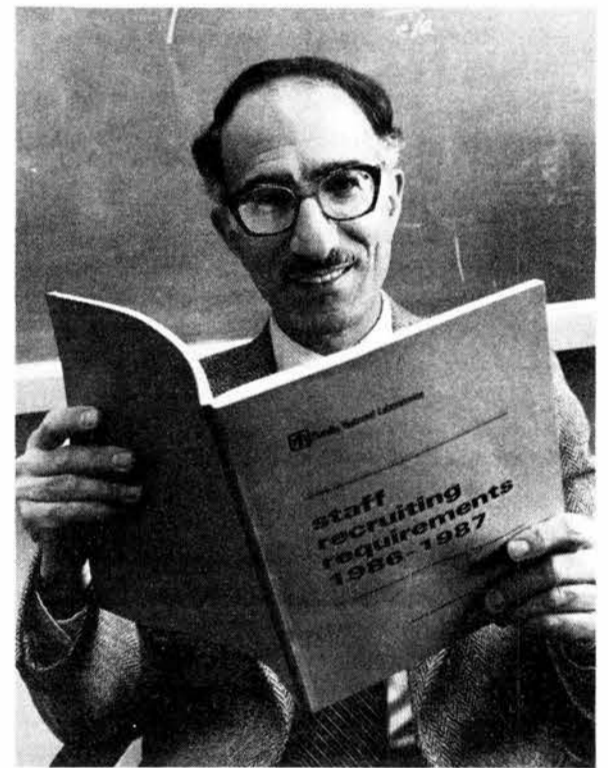
PhD Recruiting

George Samara (1130) is the captain of the team of Sandians who recruit PhDs at the University of Illinois. George's team of seven travels to Illinois in the fall each year and recruits in several departments.

"It's very important for PhD recruiters to get to know a school's faculty members, and to maintain those contacts," says George. "Through the faculty, we can track PhD candidates throughout their years in the program [normally four to six years] and keep up with their research."

From George's standpoint, an outstanding PhD candidate will have proven academic achievement (a high GPA), and will be on the leading edge of his or her technological specialty. "We like to see them doing some outstanding research during the time they're earning their PhDs, and we depend on faculty recommendations as well," he says.

"We're after original thinkers with fresh ideas who are likely to generate excitement about their work once they join the Labs," George concludes. "In fact, my greatest reward in the recruiting business is



GEORGE SAMARA (1130) captains the team that recruits PhDs at the University of Illinois. "We're after original thinkers with fresh ideas," says George.

the satisfaction I feel when I know I helped bring a talented person like that on board."

Unlike BS/MS and TI recruiters, PhD recruiters often do not work through the school's placement office; they operate instead through a faculty/colleague network to find out about outstanding employment candidates. "The Illinois placement office pretty much gives the Sandia team a free hand," says George. "The people there are extremely cooperative and very helpful — they locate interview sites, circulate advance information on our visit, and arrange on-campus accommodations for us. However, they don't insist that PhD candidates register at the placement office, and don't mind if we recruiters contact candidates directly."

PhD recruiters spend a good deal of time talking to faculty members during their campus visits, and evaluating candidates and their research. As team

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captain at Illinois, George has pre-recruiting duties as well: He makes sure team members know SNL's recruiting needs for the current fiscal year, and makes advance phone calls to lay the groundwork for the campus visit. "This involves contacting faculty members to make appointments and to let them know what kind of people we're looking for," says George. "And we also contact those candidates we've been tracking, so they'll block out some time for us when we're there."

Once back at Sandia after a visit to Illinois, George circulates resumes on candidates to technical line organizations that need people with the candidates' scientific training. ("We generally don't look for candidates to fill specific job slots," George comments. "Rather, we look at their research interests and capabilities and match them with line organization needs.")

Likely PhD candidates normally visit Sandia for two days. They talk to a cross section of people while they're here — staff members and management — and give a seminar on their research. "It's a two-way selling job," says George. "The candidate sells himself or herself with the seminar presentation and interview impressions, and we sell Sandia."

"Selling Sandia is not difficult," George continues. "Its reputation as one of this country's leading laboratories working on important national problems paves the way for us. Candidates often know that Sandia's at the forefront in many technical fields, and that Labs employees have opportunities to make important contributions. Albuquerque and Livermore are also very desirable places to live; that helps us too."

Howard Seltzer (9234) thoroughly enjoys his TI recruiting chores at Stark Technical College and Youngstown State, two schools in Ohio to which he's been assigned. "TI students tend to be young, kind of bubbly, a pleasure to be around," says Howard.

Howard's had a phenomenal success rate since he started recruiting about eight years ago; he's recruited about 45 people. The success rate is no accident. Howard works very hard at maintaining contacts at Stark and Youngstown. "That's the key," he says. "I concentrate on four people at each school: the placement director, and the heads of the electronic engineering technology, mechanical engineering technology, and design engineering technology departments. Those folks are our [Sandia's] biggest proponents; if they're on your side, you can't go wrong."

Because of Howard's efforts over the years, students at the two schools regard Sandia as *the* place to get a job, and they understand that the Labs hires only the best TI candidates. "When I make my recruiting trip in the fall," says Howard, "I include a long presentation for first-year students. TI course work is compressed into a two-year program. I think it's important to warn students just starting out that one bad semester can knock out their chances of working at Sandia, because we hire only the best — and the best have high GPAs. Along with the importance of grades, I tell them about the wide variety of jobs available at Sandia and as much as I can about the Labs."

Howard maintains a marathon schedule when he's on campus. TI students often have a full schedule of classes, and many work. So Howard often interviews far into the evening — until 10 p.m. if neces-

HOWARD SELTZER (9234) maintains a marathon schedule when he's on TI recruiting trips; sometimes he interviews employment candidates until 10 p.m. Howard wears his cowboy hat when he meets TI candidates at the airport. "They don't have any trouble picking me out of the crowd," he says.



sary. During those interviews, Howard says his Rule No. 1 is: Don't lie, don't embellish, and be as upfront as you possibly can. "I try to eliminate all surprises," he says. "I don't want people to arrive at Sandia and think 'This isn't the way Howard said it was.' I don't try to sell Sandia to people; rather I try to inform them about what they can expect."

Rule No. 1 seems to work. Howard's very proud of the retention rate on TI grads he's recruited for

Happy Hunting Grounds: Where Sandia Recruits

PhD Recruiting

UC - Berkeley*
UC - Davis*
UCLA*
Cal Tech
Carnegie Mellon*
Cornell*
Harvard
U of Illinois*
Iowa State*
MIT*
U of Michigan*
U of Minnesota*
New Mexico State*
U of New Mexico*
Northwestern
Ohio State*
U of Pennsylvania
Penn State*
Princeton*
Purdue*
Stanford*
Texas A&M*
Texas Tech*
U of Texas*
U of Washington*
U of Wisconsin*
Yale

*Also has separate BS/MS recruiting effort

Other BS/MS Recruiting

Arizona State
Northern Arizona U
U of Arizona
U of Arkansas
Brigham Young U
California Poly State - San Luis Obispo
California State - Fresno
UC - Santa Barbara
Colorado State
U of Colorado
U of Florida
Fresno State
Georgia Institute of Technology
Howard U
U of Idaho
Illinois Institute of Technology
Kansas State
U of Kansas
Louisiana State
Michigan State
Mississippi State
U of Missouri - Columbia
U of Missouri - Rolla
U of Nebraska

North Carolina A&T
North Carolina State
Oklahoma State
U of Oklahoma
Oregon State
Prairie View A&M
Rensselaer Polytechnical Institute
Rice U
Southern U
Tennessee State
Tuskegee U
U of Utah
Virginia Polytechnical Institute
Washington State

TI Recruiting

Amarillo Community College
Northern Arizona U
Broome Community College (N.Y.)
Bronx Community College
Colorado Technical College
Columbus Technical Institute (Ohio)
U of Southern Colorado
DeVry - Chicago
DeVry - Phoenix
Erie Community College (N.Y.)
Florence-Darlington Technical College (S.C.)
Forsyth Technical Institute (N.C.)
Gaston College (N.C.)
Hudson Valley Community College (N.Y.)
Kansas Technical Institute
Knoxville State
Memphis State
Morrison Institute of Technology (Ill.)
Nashville State
New Mexico State
U of New Mexico (ET program)
New York City Technical College
SUNY - Alfred
SUNY - Canton
SUNY - Farmingdale
Ohio U - Cincinnati
Oklahoma State
Owens Technical College (Ohio)
Penn State
Phoenix College
Purdue - Hammond (Ind.)
Queensborough Community College (N.Y.)
St. Louis Community College
Sinclair Community College (Ohio)
Stark Technical College (Ohio)
U of Toledo
Trident Technical College (S.C.)
Valparaiso Technical Institute (Ind.)
Youngstown State U

Sandia. For example, 29 of the 30 Stark graduates hired by the Labs are still here.

What qualifications should a good TI candidate have? "Versatility and flexibility are two important factors," says Howard. "Technical support people have to be willing and eager to work on multiple programs. Candidates also should have a strong background in whatever discipline they've chosen; that's important, because TI grads apply the fundamentals they've learned in school to a wide range of projects, often very early in their careers. They're not focused on one particular research program."

"I also look for a certain kind of enthusiasm and spark," he continues. "Don't ask me to define it, but I know it when I see it. And I like to see a candidate who's curious; that says something about a person's ability to fit in at a place such as Sandia, where something new happens every day."

TI recruiting has many rewards, according to Howard, though the biggest one is savoring the success stories of people he's recruited. He follows up with them during their first year on the job at Sandia. Howard puts it this way: "I really get a kick out of seeing people realize that a job can be fun — that not everyone has to trudge to the mill every day."

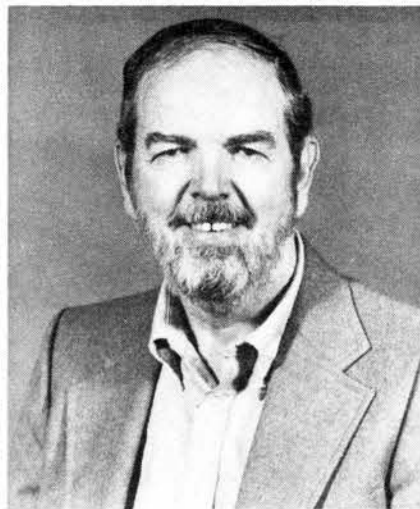
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Kay Scranton (7116) 35 yrs.



Ed Thuman (2822) 30 yrs.



Joe Danclovic (3000) 31 yrs.



Ed Stout (7137) 37 yrs.



Herb Sisson (5249) 29 yrs.



Fenner Jones (7137) 32 yrs.



Ed Neidel (2361) 37 yrs.



Jack Wiesen (7200) 36 yrs.



Van Luhrs (5111) 35 yrs.



John (Bud) Wheeler (3531) 33 yrs.



Harold Jeske (5141) 35 yrs.



David Webb (1533) 33 yrs.

feed^{it}back

Q. I have a problem with the form that has to be filled out to escort an uncleared visitor inside a Tech Area. It states "the escort assures that the visitor . . . takes no contraband into the area."

How am I to do this? Am I to search their pockets? How am I to be sure they have no contraband in their socks or some body cavity? It is unreasonable to ask an employee who is not properly trained to fulfill that request.

A. The intention of this requirement is to be sure we operate within the regulations established by DOE and the policies of the Laboratories for good security practices. Visitors should be asked to read the signs, posted at all entrances to the Tech Areas, that indicate the following are not to be taken into the area:

- Radio Transmitters
- Dangerous Weapons or Materials
- Illegal Drugs
- Cameras
- Firearms or Ammunition
- Intoxicants
- Devices: Copying
- Transmitting
- Explosive
- Recording
- Reproduction
- Incendiary

If there is any question about the visitor or the articles he/she may have in their possession, contact the Security Inspector at the entry point. You are not expected to search visitors personally.

Jim Martin - 3400

AT&T Savings Plans

The following are the Earnings Factors as of Aug. 31, 1986, for the AT&T Savings Plan for Salaried Employees (SPSE), AT&T Savings and Security Plan for Non-Salaried Employees (SSP), and the AT&T Voluntary Contribution Plan (VCP):

	Earnings Factors
SPSE (Savings Plan for Salaried Employees)	
AT&T Shares	1.0432
Government Obligations	1.0145
Equity Portfolio	1.0644
Guaranteed Interest Fund	1.0091
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0814
Realized Appreciation	.0000
SSP (Savings and Security Plan—Non-Salaried Employees)	
AT&T Shares	1.0424
Guaranteed Interest Fund	1.0093
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0805
Realized Appreciation	.0001*
VCP (Voluntary Contribution Plan)	
AT&T Shares	1.0419
Mutual Fund Equity Portfolio	1.0841
Money Market Fund	1.0055
Guaranteed Interest Fund	1.0094
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0805
Realized Appreciation	.0000

*The 1 has been removed from the earnings factor. Current month's DTP earnings may be calculated directly: Earnings Factor x DTP Current Worth = Current Month's Earnings.

RAPRENOx

Sandia Livermore VP Dick Claassen (8000) shares their optimism for its potential, but he emphasizes that the concept has been investigated only at the laboratory stage so far, in order to prove a scientific theory. "The technology — including engineering research and the development of practical devices — does not yet exist," says Dick. "The next steps — product-oriented research and development — must be transferred to the private industrial sector."

Payoff from Energy Research

"This work is an excellent example of the payoff from energy research begun at the national nuclear weapons laboratories a decade ago," notes President Welber. "Pollution costs a great deal of money and impedes efficient use of such fuels as coal, one of our most plentiful resources. Control of smog and acid rain would strengthen industry, make the country more competitive, and at the same time improve the environment."

"This particular invention has exciting potential for both pollution control and the greater use of cleaner, efficient diesel engines in industry and on the road," says Energy Secretary John Herrington. "The discovery is an excellent example of how DOE's national laboratories can support basic research, and how the results are being transferred into the private sector."

In order to facilitate the transfer of the new process into the private sector, the DOE has waived its title to the patented invention in favor of Bob, who plans to leave Sandia and form a company aimed at bringing the invention to technological fruition (see "Perry Granted Title"). The federal government, however, retains the right to use the invention without paying any license fees.

If RAPRENOx is successfully commercialized, it could have a significant and positive effect on transportation and heavy industry by providing a practical means to meet federal air pollution guidelines. One of the nitrogen oxides, NO₂, is known to be a precursor molecule in the production of photochemical smog. Sunlight splits the nitrogen dioxide molecule into nitric oxide plus an oxygen atom. The oxygen atom reacts with oxygen in air to produce ozone, one of the major ingredients in smog.

One of the beauties of the RAPRENOx process is that it's the exhaust gas itself that provides the heat needed for the cyanuric acid to sublime (change from solid to vapor) and transform into isocyanic acid (HNCO). The isocyanic acid then mixes with the exhaust gases, reacts with the nitrogen oxides, and generates non-smog-causing gases.

The feasibility of applying the RAPRENOx process to real exhaust gases to reduce NOx has, thus far, been explored only in an engine experiment using a portion of the exhaust of a single-cylinder diesel engine. In these initial experiments, nitrogen oxide levels were successfully reduced by 99 percent or more. Additional experiments will explore the application of the RAPRENOx process to diesel en-

Under DOE Waiver Regulation

Perry Granted Title to RAPRENOx

I want to invent something I can make for a dime, sell for a dollar, and is habit forming."

—John Patrick, *The Curious Savage*

As far too many penniless inventors have discovered, inventing something and getting a patent on it don't mean automatic fame or fortune. Glenn Kuswa, manager of Technology Transfer and Management Dept. 4030, puts it this way: "An invention is just the beginning of the innovation process. Most of the risks and costs lie in the development and marketing phases, not in the research phase. And most inventions, in fact, never do make it to market."

Where RAPRENOx is concerned, Sandia and the DOE considered that problem and a couple of other facts:

- If RAPRENOx lives up to its early potential, it will help to solve some of the nation's most challenging pollution problems. It definitely deserves its chance in the marketplace.

- Sandia does not compete with private industry in product-oriented research and development, manufacturing, or marketing — successful commercialization, in other words. Sandia will not commercialize any product.

- The direct involvement of the inventor is normally the most efficient means to commercialize an invention. If rights to an invention are made available to the entire private sector, no one company is usually willing to risk the development funding that commercialization demands. Many think that "exclusivity" is the best tool for promoting commercialization.

Therefore, under terms of a waiver regulation that enables the DOE to relinquish its title to an invention (either in favor of the contractor — AT&T in the case of Sandia — or in favor of the inventor, if the contractor for which he or she works gives the authorization to request it), the DOE reviewed Bob Perry's business plan for commercializing RAPRENOx, deemed it satisfacto-

ry, and waived its rights to the invention. (Under terms of the waiver regulation, the DOE still reserves the right to use the technology for itself without paying any license fees.)

Not the First Time

It's not the first time a Sandian has been granted similar rights. Back in the days when Sandia was a contractor to the Atomic Energy Commission, the AEC occasionally chose not to file for a patent on an invention but allowed the inventor to do so. Jay Gilson (now 8130) was one employee who followed that route when he and former Sandian Jack Foster developed what was then a new application of lasers for interferometry useful with machine tools. After receiving a patent, Jay and Jack sold their rights to a machine tool company.

In 1979, a case more similar to RAPRENOx involved Errol Eer Nisse. He was granted, through DOE's waiver process, the right to commercialize Sandia-developed quartz transducers based on the "tuning fork" principle. Errol now heads a successful company in Utah.

"Errol's ship has come in," says Kurt Olsen, manager of Patent and Licensing Dept. 4050. "We're now helping to launch Bob's boat and, we hope, those of other Sandians in the future. And we're going to watch those boats — as the statistics on business starts and failures make very clear, it's a high risk, but that's what it takes to be an entrepreneur. Bob's got several years of development ahead of him, and he's giving up a secure job — not easy to do with family responsibilities.

"So we're giving him an exciting opportunity, but it's far from a sure success," Kurt concludes. "He certainly won't be a millionaire tomorrow — and if and when he is, he will have earned every dollar!"



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gine exhaust and further examine the process to ensure that undesirable by-products are not produced.

One major advantage of the technique over existing chemical additive technologies is the ability of the process to occur at lower temperatures (less than 600 degrees C, as opposed to 1000 or 1100 degrees C). But extensive research, technological development, and testing lie ahead before all the experiments can be confirmed and RAPRENOx can be made publicly available.

Combustion Research Facility: A National Resource

Sandia Livermore's Combustion Research Facility, where Bob Perry invented RAPRENOx, is a national resource for studying fundamental problems in energy-related combustion. Scientists from all over the U.S. — and the world — join the CRF's staff to carry out a rigorous combustion research program.

Using state-of-the-art laser-diagnostic and computational tools, the researchers work toward understanding the challenging complexities of what most people consider "plain old combustion, what their car's motor does thousands of

times a minute."

"Members of the CRF's staff and the visiting scientists are making contributions in many areas of combustion science," notes Dan Hartley (6000). "It's an interdisciplinary program that builds on a foundation of specially designed laser diagnostic systems and Sandia's Cray computers."

Funded by DOE's Office of Basic Energy Sciences and its offices of Conservation and Renewable Energy and of Fossil Energy, the CRF program is home to nearly 100 Sandians.

Higher LEAP Achieved

New Records Set

Sandia Livermore employees dug deeper into their pockets than ever this year to enable the 1986 LEAP (Livermore Employees Assistance Plan) campaign to attain its ambitious goal of \$135,000.

LEAP chairman Jim Woodard (8432) was very pleased with the results and praised the large number of Sandians who participated — a record 86 percent of the work force. "Our success means a merrier Christmas and a happier 1987 for the 27 local agencies — plus United Way and the California Combined Health Agencies — we support with our campaign dollars," Jim said.

The \$135,000 raised set another all-time high in charitable contributions by Sandians, and the amount per individual participant now averages \$146, up \$15 over last year. Also on the increase is the number of Fair Share contributors—276 people this time—who pledged 0.6 percent of their monthly paycheck to charity.

Jim also thanked his volunteer employee committee that took part in the agency interviews and selection, brochure, and publicity efforts. He also thanked those involved in the spectacular LEAP Agencies Faire that kicked off the LEAP campaign with a "Nifty Fifties" party on Oct. 14.

Simmons Chooses New Problem

Senior Fellows will be the equivalent of directors in rank, will report directly to a Sandia officer, and will receive an appointment increase of \$4000. Senior Fellow candidates are nominated by their vice-presidents and selected by the president based on the recommendation of Small Staff.

Simmons Named First Senior Fellow

"I'm pleased to announce that the first Senior Fellow recipient is Gus Simmons [manager of Applied Mathematics Dept. 1420]," said Irwin. "The appointment is effective on Jan. 1. He will report directly to me, and he and I have already discussed the tasks he intends to pursue in his new position" (see below).

"I don't anticipate many Senior Fellows in the future," Irwin continued. "We are, as the guidelines indicate, restricting this honor to a 'very limited' number of Sandians who have made 'truly exceptional' technical contributions to the Labs and the nation. Only people who have achieved national or international acclaim for their work — E. O. Lawrence Award winners, for example — will be considered for the new position.

Honor, Recognition, Opportunity

"It's designed to be a rare honor, a recognition of unique achievement, and an opportunity for the recipient to perform research and/or development work unencumbered by the demands of management or supervision.

"I've discussed with Gus four activities that he will pursue as a Senior Fellow," continued Irwin. "He'll continue his personal research in the areas

of nuclear weapon command and control — specifically, in the accuracy and authenticity of encrypted messages — that have brought him international acclaim and an E. O. Lawrence Award [see LAB NEWS, July 18, 1986]. He'll identify and catalyze appropriate new initiatives for Sandia. He'll help with our recruiting effort. And he'll work with young Sandia researchers in much the same way that a research professor at a university does.

"In all these areas," Irwin concluded, "he'll be expected to take full advantage of the freedom he has as a Senior Fellow for cross-Labs interchanges."

Simmons Chooses 'Inexplicable' Gap

Gus is elated. "If I'd set out to design my ideal job, I couldn't have done as well," he noted. "President Welber and I have agreed that I'll attack an inexplicably overlooked problem that has overwhelming implications. That's the problem of terminating or scaling down a war that has gone nuclear.

"In other words, the problem is 'how do we keep a nuclear confrontation from escalating even further when the adversaries want to de-escalate?' You see, it's axiomatic that a nuclear war would end, somehow, sometime. But, so far, the superpowers have concentrated their efforts only on the 'before and during' phases of a possible nuclear war: On the civilian side, we have created admirable controls to ensure that weapons cannot be used except when properly authorized and to ensure that weapons will operate reliably if they're ever needed; on the military side, we have created protocols and other procedures for using them effectively during a war. That system has served well for 25 years.

"But, so far, we've left a major gap: We've done little about the problem of establishing and protecting the communication, command, and control sys-

tems that would be needed for adversaries to agree to end a nuclear war, or even to restrict the types of weapons that would be used. For example, an exchange of tactical weapons in Europe could escalate to an exchange of strategic weapons worldwide even if neither side planned to use anything but small tactical weapons, simply because the conflict outran their ability to control it.

"The problem is anything but negligible — and anything but simple," Gus continued. "To start a war, only the allies on each side would have to communicate. But to end one, the belligerents would need to communicate with each other and with their own military, and would need some means to re-establish control — that is, to re-lock the weapons unlocked in preparation for use. They must be able to do it during the heat of a nuclear battle, and must be able to do it almost instantaneously. You see, unlike the old days — when massive destruction took weeks, even months, and adversaries could negotiate peace through a third party over days or weeks — we have to think in seconds and minutes now.

"Obviously, the means to re-lock a family of unused weapons has to have authentication provisions inherent in it. After all, an enemy would love to be able to send the signal that would re-lock a weapon before it could be used. And authentication is my specialty.

"Sandia is well equipped to tackle such a 'termination or reduction of nuclear hostilities' problem," concluded Gus, "and the position of Senior Fellow is the ideal forum within Sandia from which to conduct the necessary research prelude. It's an opportunity for significant contribution."

Pioneering the Field

According to Gus, what's already been done in this area has been primarily in the political arena — how to re-establish communications that would permit negotiations after a nuclear exchange. The Kremlin-White House hotline secure phone link is the visible portion of that political consideration.

But little has been done on the technical side. "I regard [former Sandia President] George Dacey as the inspiration of this research area," Gus noted. "He was most concerned with how to terminate a nuclear war, should one somehow occur. Specifically, he talked about the need for communication links with an adversary that would not have any military advantage and so would not be a part of any military target. Those conversations, the articles by political thinkers, and my own interests in command/control are the foundation for the new research effort."

From Technician to Senior Fellow

Gus first came to Sandia as a computer technician in 1954. In 1955 he earned a BS in math from Highlands University ("I'd ended up in Las Vegas when our car broke down on our way from Washington, D.C., to California," Gus recollected), and made MTS in 1958, after earning an MS in physics from the University of Oklahoma.

In the early 60s, he headed up a "black hat" division concerned with finding ways to defeat the PALs (Permissive Action Links), which were designed to restrict the use of nuclear weapons only to those with the proper authorization. He finally earned his PhD, in math, from UNM in 1969.

Until his appointment as Senior Fellow, Gus spent some 14 years as head of Sandia's math department. Last Sept. 11, he won the E. O. Lawrence Award "for contributions to national security through application of advanced mathematics to the command and control of nuclear weapons, especially in establishing the field of authentication as a central element of public key cryptography."

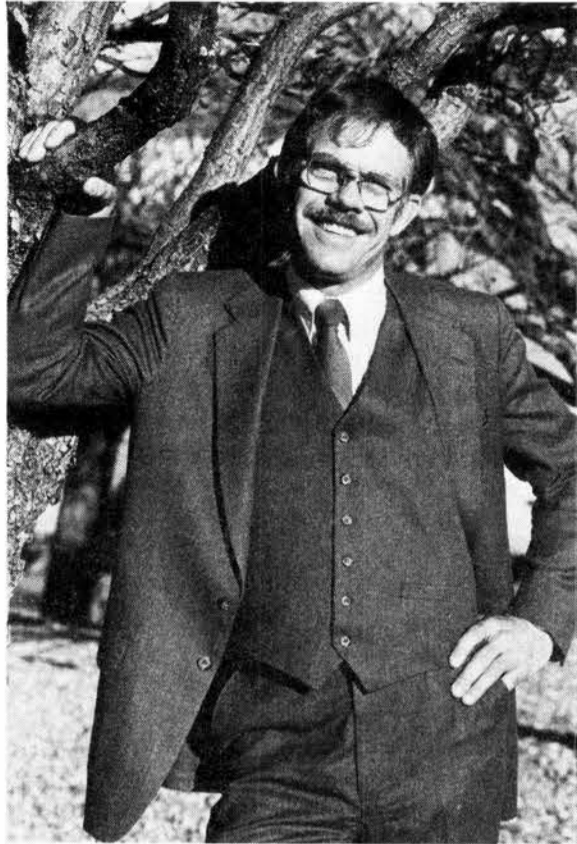


SAYING FAREWELL to the 12-year-long solar program at Sandia Livermore could have been sad, but participants over the years decided to get together for a "Sunset Party" at the local Elks Lodge recently to celebrate the many fruitful years that the program flourished, culminating in the completion of Solar One near Barstow. (At that site more than 1800 heliostats — solar mirrors — focus the sun's rays on a central receiver tower, providing some 10 megawatts of electricity to Southern California Edison customers daily.) Making a few remarks about the start of the solar work at Livermore during his 14-year vice-presidency is Tom Cook (right), now retired. Others (from left) are Gerry Braun, former Division Director of Solar Thermal Technology for DOE and now with PG&E in California; Al Skinrood (8133), former supervisor of the Solar Central Receiver Systems Division; Clay Mavis (DMTS, 8133), a solar pioneer (and party organizer); and Cliff Selvage (8234), former Solar Department Manager. Also present was Tom Brumleve, a retired Sandian who is considered the father of Livermore's solar effort. Some 140 Sandians and guests enjoyed the dinner, a toast to "another sunrise after the sunset," and dancing to a live band.

Holiday Events Calendar

- Dec. 19 — NM Old Timers Roping, Indoor Horse Arena, NM State Fairgrounds, 265-1791.
- Dec. 19 — Parks and Recreation Luminaria Tour: Santa Claus, Christmas scenes and more than 20,000 luminarias; dusk to 10 p.m., free, NM State Fairgrounds, 766-7856.
- Dec. 19-21 — "Keeping Score," musical comedy; 8 p.m. Fri.-Sat., 3 p.m. Sun.; Second Story Arts Center (behind Albuquerque Little Theatre), 242-4750.
- Dec. 19-31 — Exhibit, "From the Weaver's View: Indian Baskets of the American West"; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat.; middle gallery, Maxwell Museum of Anthropology, 277-4404.
- Dec. 19-Jan. 5 — Exhibit, "Tiger, Tiger," photographs of animals of India; 10 a.m.-5 p.m., NM Museum of Natural History, 841-8832.
- Dec. 19-Feb. 2 — "Maya, Treasures of an Ancient Civilization"; 11 a.m.-5 p.m. Tues., 1-9 p.m. Wed., 11 a.m.-9 p.m. Thurs.-Fri., 10 a.m.-5 p.m. weekends; Albuquerque Museum, 243-7255 or 242-4600.
- Dec. 19-July 31 — Exhibit, "Maya: The Image from the Western World"; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat.; main gallery, Maxwell Museum of Anthropology, 277-4404.
- Dec. 19-Jan. 4 — "A Christmas Carol," adaptation by Barbara Field from Charles Dickens, NM Repertory Theatre; 8 p.m. Tues.-Sat., 2 p.m. matinees Sat. & Sun. (special 1 p.m. & 6 p.m. performances Christmas Eve); KiMo Theatre, 243-4500.
- Dec. 19-Feb. 4 — Exhibit, "Terra Maya," photos depicting Mayan art and architecture based on nature; New Mexico Museum of Natural History, 841-8837.
- Dec. 20 — Christmas party, 2-4 p.m., free, South Broadway Cultural Center, 848-1320.
- Dec. 20 — "Santa's Favorite Story," short play, Santa will be on hand to sign books and take last-minute requests after the show; 1 p.m., UNM Continuing Education Conference Center, 277-3751.
- Dec. 24 — Annual Christmas Eve Luminaria Tour of Country Club area, Old Town, and Los Altos Park; 6 p.m., Park & Ride site at University and Stadium SE, Sun Tran, 843-9200.
- Dec. 26-Jan. 4 — "Camelot," classical musical based on King Arthur legend, presented by Albuquerque Civic Light Opera; 8:15 p.m. weekends, 2:15 p.m. matinees; Popejoy Hall, 345-6577.
- Dec. 31 — Times Square on Civic Plaza: music, entertainment, and activities for children; 8 p.m.-midnight, free, Civic Plaza, 766-7856.
- Jan. 3-26 — Exhibit, "Kukulcan and Awanyu: One Image, Two Cultures," iconography of the feathered serpent in Central America and New Mexico; 9:30 a.m.-5:30 p.m., Indian Pueblo Cultural Center, 843-7270.
- Jan. 9-10 — Danzantes Dance Company presents "New Dance Works," dances performed to compositions by Mozart, Bach, Brahms, Rodrigo, and contemporary composers; 8 p.m., KiMo Theatre, 865-0676.
- Jan. 9-Feb. 1 — "K2," love and death on the world's second highest mountain; 8 p.m., Vortex Theatre (Central & Buena Vista), 247-8600.
- Jan. 10 — Magic of Music, city-sponsored children's concert conducted by Roger Melone; guest artist Craig Dickens, master magician; 2 p.m., Kiva Auditorium, 843-7657.
- Jan. 16-17 — NM Symphony Orchestra, Classical Concert V: guest artist, James Van Demark; guest conductor, David Efron; 8:15 p.m., Popejoy Hall, 843-7657.
- Jan. 16-18 — World of Wheels Car Show, noon-11 p.m., Albuquerque Convention Center, 768-4575.

Alzheimer Promoted to Director



BILL ALZHEIMER (2800)

Bill Alzheimer has been named director of Design Engineering Services 2800, effective Dec. 16.

Bill joined Sandia as an MTS in the Engineering Dynamics Division in September 1966. Three years later, he was promoted to supervisor of the Applied Mechanics Division. Subsequently, he headed several other divisions: W74 Project Management, Heat Transfer and Criteria, and Advanced Development. In 1976 he was promoted to manager of the

Applied Mechanics Department at SNLL. He transferred to the Engineering Technology Department there in 1981 and, a year later, moved to the Systems Development Department II. Last January Bill returned to SNLA to head Weapons Engineering Department 5120, the position he had before his recent promotion.

"I'm looking forward to the new job," says Bill. "Organization 2800 has the responsibility of providing engineering services to the Labs in an efficient and cost-effective manner, and we'll meet that challenge by using the latest advances in technology to do the job."

Bill has a BS and MS in civil engineering and applied mechanics from Montana State University, and a PhD in engineering mechanics from Virginia Polytechnic Institute and State University.

He's a director of the N.M. Section of ASME and was chairman of ASME's National Membership Development Committee in 1984-85. Bill's also a Registered Professional Engineer (N.M.).

He and his wife Rebecca live in the NE Heights. They have a married daughter.

Death



Howard Mauldin (DMTS), of Passive Components Division 2566, died suddenly Nov. 21. He was 64 years old.

Howard had been at the Labs since November 1949.

He is survived by his wife, five daughters, and two sons.



Bless Them Every One

Santa's Workshops Busy With Christmas Projects

Small cash gifts to people living along Highway 14 (south of Tijeras) will be distributed tomorrow, Dec. 20, by retirees John Shunny and Julian Sanchez. The "South 14 Village Project," now in its 20th year, has compiled a list of 80 needy families. The primary income that many of them rely on comes from firewood sales and subsistence farming. John hopes to help at least a dozen families this year. "Many people still don't have chain saws — or interior plumbing," says John. "This year, we'll be helping a changing population in Escabosa, Chilili, Tajique, Torreon, Manzano, and Punta. It's mainly adult families, either old-timers who have retired or people whose kids have grown and moved away." John has been raising funds by selling Sandia T-shirts (\$7), caps (\$7), and aerial photos (16" by 20," of

Tech Area I, \$20 each), but is also willing to accept cash donations. Just make out a check to "So. 14 Village Project" and send it to LAB NEWS (3162) or drop it off at Bldg. 814, Rm. 1.

* * *

What could be more basic than a pair of warm shoes in winter? Yet many kids in Albuquerque don't even have that. Dan Rohr (7212), the dynamo behind the "Shoes for Kids" project in the 7200 directorate, has set a goal of helping at least 100 children from Dolores Gallegos and Mountain View elementary schools. The project is in its 29th year. The elves at Coronado Center's Kinney Shoe Company throw in a discount and a free fitting for each child. If you can help, just send a check to "Shoes for Kids," Div. 7212.

GIDEP Helps Reduce Costs And Duplication of Efforts

Re-inventing the wheel may, of course, be preferable to going wheel-less. But needless duplication of R&D efforts must be avoided.

That's not always easy. And that's where GIDEP (Government-Industry Data Exchange Program) comes in. The program encourages the exchange of technical data essential to the research, design, development, production, and operational phases of the life cycle of systems and equipment.

Through that exchange of existing knowledge, GIDEP helps Sandia and its other 786 government and industry participants reduce, or even eliminate, some of the time and money they spend in getting their jobs done. "For example, Sandia traced savings of some \$90,000 to its GIDEP program in 1985," says Pat DeTevis; he and Mike Michnovicz (both 2833) administer most of the program for SNL.

GIDEP's primary objectives are to improve reliability, quality, productivity, safety, and logistics support. The program, which is centrally managed and



DURING THE GIDEP WORKSHOP, Vice-President Larry Anderson (2000) received a certificate of appreciation from Navy Captain Edward Stacy; Stacy manages the national GIDEP program with a staff of some ten civilians from the Navy Fleet Analysis Center at Corona, Calif. Anderson, along with Albuquerque Mayor Ken Schultz, welcomed the representatives to the four-day workshop.

funded by the government, gives its members access to four major data interchanges: engineering, failure experience, metrology (the study of measurement), and reliability-maintainability. Don Wright (7222) is Sandia's representative for the latter data interchange.

"We've reviewed several reports from GIDEP this year," says Bob Lindsey (7474), "and they've been quite valuable in our inspection work." Louis Hernandez (2825) echoes that theme: "The GIDEP

reports have helped us in our quality assurance, test equipment, and production work. They're really useful."

Sandia, a member of GIDEP or its predecessor organization since 1968, recently hosted GIDEP's annual workshop in Albuquerque. More than 200 representatives of major private industry and government organizations attended.

Supervisory Appointments

DICK SHEPARDSON to manager of Salary Administration Department 3550, effective Nov. 1.

Dick joined the Labs in August 1966 as a programmer/budget analyst in the C-Items group. He transferred to a personnel data group in 1968, and stayed until joining the budget organization in 1975. In 1981, Dick went to general accounting. In 1982, he was appointed assistant to VP 7000 and later to VP 5000. He became supervisor of Customer and Supplier Accounting Division 155 in November 1985.

Dick has a BA from the University of Tennessee in industrial management and an MBA from UNM. Before coming to Sandia, Dick served four years in the U.S. Navy.

In his spare time, Dick enjoys woodworking and camping. He and his wife Patricia have three children and live in the NE Heights.

* * *



DICK SHEPARDSON (3550)

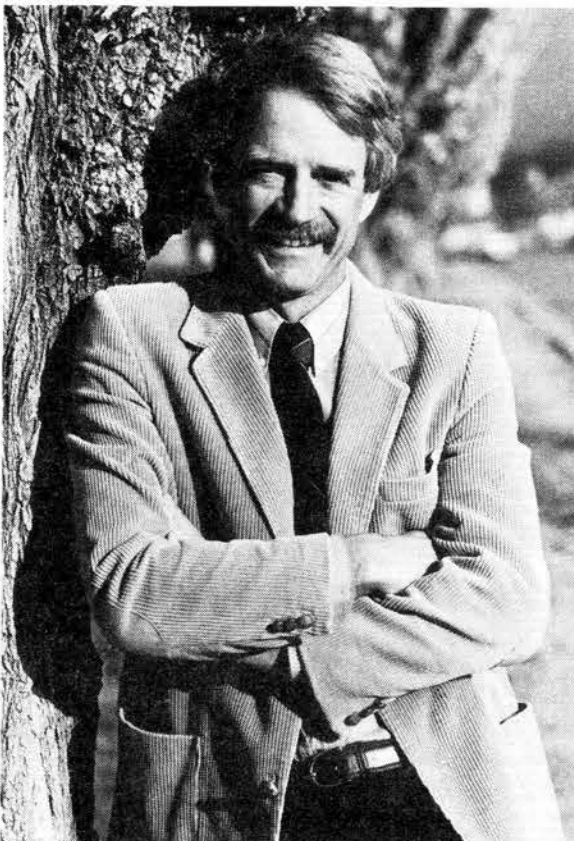
MICHAEL CALLAHAN to manager of Radar Department 2340, effective Nov. 1.

Michael joined the Labs in February 1976 as a member of the Signal Analysis Division. He later moved to the Exploratory Systems Division where he worked on radar-aided navigation systems.

Before coming to Sandia, Michael worked for the AEC's Naval Reactors Division (Admiral Rickover's organization), which was responsible for Navy nuclear propulsion plants. He left Naval Reactors to attend graduate school, and received his PhD in physics from the University of Utah.

In June 1982, Michael was appointed supervisor of Exploratory Radar Development Division 2345. That division is involved in technology for high-resolution and imaging radars, and is currently developing a synthetic aperture radar for Sandia advanced reentry vehicle systems.

In his spare time, Michael enjoys backpacking and rafting. He and his wife Mary have two children and live in the NE Heights.



MICHAEL CALLAHAN (2340)

PSP Increased

Sandia's Board of Directors recently approved a special increase in pensions effective Jan. 1, 1988, for all eligible retired employees and annuitants who are covered under the Pension Security Plan (in general, certain union-represented and/or non-salaried employees). These changes were discussed with Sandia union representatives before being approved by the Board.

To be eligible, a retiree or annuitant (1) must have elected to participate in the pension plan as revised in July 1975 and (2) must be receiving a pension on Dec. 1, 1987.

"We're pleased to announce the improvement," says Ralph Bonner, Director of Personnel 3500. "It's another in a continuing series of steps AT&T — and Sandia — are taking to keep our total benefits package competitive with those of other major companies around the country."

The increase is subject to DOE and Internal Revenue Service approval. All eligible retirees and annuitants will be notified of this increase by letter following DOE approval. It is Sandia's intention to begin paying the increase effective Jan. 1, 1988, with DOE approval, and without necessarily awaiting IRS approval. If the IRS does not approve the increase, it will have to be discontinued for future pension payments.

For eligible retirees on pension in January 1985 or earlier, the increase will be 4.5 percent of the pension amount payable on Jan. 1, 1988. For eligible retirees whose pensions were effective after January 1985, the increase will be equal to 1/36th of 4.5 percent (0.125 percent) for each full month of retirement from the effective date of pension through December 1987. The minimum increase will be 0.125 percent (one month) and the maximum will be 4.5 percent (36 months). The last special increase granted under the Pension Security Plan was effective Jan. 1, 1985.

For those eligible employees and retirees working past age 65, the increase will apply in the same manner to service pensions payable at retirement as if they had retired at age 65 instead of continuing to work, except to the extent that they receive service credit for such post-age-65 employment.

Similarly, for those cases in which a surviving annuitant's pension is currently being paid or the survivor annuity has been elected, the same percentage of increase applicable to a service or disability pension will also apply to an annuitant's pension.

Take Note

Dick Traeger (6240) was elected a director of the American Institute of Chemical Engineers (AIChE). He is one of four new directors chosen to serve three-year terms on the governing council of the approximately 60,000-member society. He has served the Institute as a director and program chairman of the fuels and petrochemicals division, and as a member of the educational advisory board and the new technology committee.

* * *

Joyce van Berkel (3144) was elected to a two-year term as a member of the Defense RDT&E On-Line System (DROLS) Users' Council. She is one of eleven council members selected from more than a thousand Army, Navy, Air Force, DNA, and contractor people who work with the classified DROLS data base.

* * *

Carol Stein (6331) tells us that Jim Krumhansl (1543) is the co-author of the paper "Geochemical Overview of the Waste Isolation Pilot Plant near Carlsbad, New Mexico," winner of the Best Technical Paper Award at the Waste Management '86 Conference in March. Jim's name was omitted in the original announcement in the American Nuclear Society newsletter and in our last issue. Sorry, Jim. Thanks, Carol.

* * *

Of course you know all that's going on in *your* directorate, but how about all the others? A display of "director posters" created for the department manager's conference in October will hang in the Bldg. 802 lobby through January. The posters provide a quick overview of which organizations do what, and include enough humor to catch the eye of jaded DMs.

* * *

The University of New Mexico will again offer a course in "Entrepreneurial Engineering" (ME 456) in the spring semester. Sandia staff members with backgrounds in engineering or science disciplines have taken the course; some have developed business plans, with class assistance, for companies they have contemplated starting. The class works in teams, starting one to three new businesses each semester. Staff members with technical or business backgrounds who have in mind possible business developments are especially invited to enroll. The Labs Technology Transfer and Patent organizations both cooperate with the class. The class meets on Thursdays, beginning Jan. 22, from 6:30 to 9:30 p.m. in Room 218, Mechanical Engineering Building. Enrollment must be completed in Student Services Building Registration Center (telephone 277-5548) by Jan. 23, and costs \$127.50 for the three-unit class. For more information, call Professor Bill Gross on 277-6297.

* * *

A call for papers for the 9th Annual Ideas in Science and Electronics Exposition and Symposium (ISE '87) has been issued by Martin Bradshaw, technical program chairman. ISE '87 will be held May 5-7 at the Albuquerque Convention Center, co-sponsored by ISE Inc., the Albuquerque Section of IEEE, and the Rio Grande Chapter of the Electronic Representatives Association. Symposium theme is "Technology Along the Rio Grande," and papers are invited from (but not limited to) eight areas: communications, computer applications, instrumentation, transducers and measurements, microelectronics and thin films, military avionics, power systems, robotics, and real-time digital signal processing. Those interested in presenting a technical paper at ISE '87 should send a one-page abstract by Dec. 20 to Martin Bradshaw, c/o ISE Inc., 8100 Mountain Road NE - Suite 207, Albuquerque, NM 87110 (phone 262-1023). Authors of selected papers will be notified by Jan. 15; completed papers will be due by April 8. Papers must be unclassified, have unlimited distribution, and have company/government clearance.

* * *

The 23rd Annual Symposium of the New Mex-



THE 100,000TH FILE, fed into the system by (center) Gary Harms (6421) in Area V, was stored in the IBM Integrated File Store (IFS) computer two days before Thanksgiving. Gene Theriot (left), manager of Central Computing Facility Network Design Department 2640, gave Gary a plaque commemorating the milestone event — and returned his file cartridge. Sue Kelly (2645), a systems programmer for the IFS system, says "the cartridge that held Gary's track-and-cylinder-addressable file [in the form of 80 feet of rolled-up magnetic tape] was ghosted and presented to him as a souvenir." Most files are transferred over the hyperchannel from permanent file storage in IFS to the Cray XMP/24 for processing and then back to IFS.

ico Chapter of the American Vacuum Society is scheduled for May 4-7 at the Sweeney Convention Center in Santa Fe. The meeting includes sessions on surface science, thin films, electronic materials and processing, and vacuum science and technology. Contributed original papers in all of the above areas are also solicited. Abstract deadline is March 6. Submit one-page abstracts to 1987 NM/AVS Symposium Chairman M. T. Paffett, MS-D429, Los Alamos, NM 87545 (phone 8-843-9584).

A four-day program of education courses will be held in conjunction with the symposium. The courses offered include (depending upon demand) a four-day basic vacuum technology course and a number of one-day specialized courses. For more information on the courses, contact Prof. Frank Williams, Department of Chemistry and Nuclear Engineering, UNM, 87131.

A vacuum equipment exhibit will be held concurrently with the symposium. Interested exhibitors should contact the symposium vendor coordinator, Vivienne Harwood Mattox, on 292-7763.

* * *

The Graduate Institute at St. John's College is now accepting applications for its spring session. The Master of Arts program meets two evenings a week and begins Jan. 12. The deadline for applications is Jan. 5. The curriculum is divided into four segments: Politics and Society, Literature, Philosophy and Theology, and Mathematics and Natural Science. All four segments must be completed to receive a Master's degree. The course of study at St. John's is based on reading and discussing some of the great books of Western civilization. Such works as Plato's *Phaedo*, the Bible, and Kierkegaard's *Philosophical Fragments* will be studied in the Philosophy and Theology segment offered in Albuquerque this spring. For additional information, call 1-982-3691, ext. 226.

* * *

For a bird's eye view of Maya structures without leaving the ground or the country, don't miss the display of 50 aerial photographs by Marilyn Bridges at the Main Albuquerque Public Library through Feb. 7. Titled "Yucatan Earthscapes," the exhibit communicates the complexity and monumentality of Maya structures. Bridges took photos from a low-flying light plane (with the door removed) at exactly the right time of morning. Also at the Library through Feb. 7 is "Views of Ancient Monuments in Central America, Chiapas & Yucatan," a set of 25 prints of the drawings of Frederick Catherwood that show the Maya area as it looked in the 1840s. For more information, contact Elaine Shannon on 768-5116.

* * *

The National Atomic Museum has also caught

the spirit of the Maya. "Radar Mapping and Ancient Maya Land Use" is the title of an exhibit scheduled there Jan. 8 through Feb. 8. The exhibit shows how high technology (satellite and side-looking radar imagery) has aided archaeologists in discovering agricultural methods used by the Maya, such as raised fields and canal systems.

On Jan. 13, Peter Harrison, adjunct professor of anthropology at UNM, will present a slide show titled "The Benefits of High Technology for Archaeological Uses." The presentation shows how the use of high technology played an integral part in discovering Mayan agricultural techniques. For more information, call Rick Ray on 4-4225.

* * *

The New Mexico Museum of Natural History is offering landlubbers a whale of a sea cruise. Join the whale watching expedition set to launch Jan. 11 through 14. The expedition, led by Jeffry Gottfried (Museum Chief of Education) and David Hafner (Chairman of the Museum Science Department), will explore the waters from San Francisco to Monterey, and study the diverse activities of colorful tide-pool invertebrates, sea lions, elephant seals, pelagic (living in the open sea) birds, and, of course, the great whales. The price of \$800 includes all transportation, meals, lodging, and entry fees. For more information, call Debbie Bristow on 841-8837 (Mon., Wed., Fri., 9:30 a.m.-1 p.m.; other times, leave a message at the same number).

* * *

On exhibit until Dec. 31 at the Indian Pueblo Cultural Center are 12 life-size mannequins of great American Indian leaders in traditional dress. The free exhibit is sponsored by *Encyclopaedia Britannica*. A curator is available for tours and slide presentations, phone 843-7270. The Center hours are 9 a.m.-5 p.m. every day.

* * *

Those who know a quatrain from a couplet should note that the National Federation of State Poetry Societies, Inc., has announced its annual poetry contest. The contest (open to all poets) starts Jan. 1 and ends March 15. There are fifty categories with cash prizes; the grand prize is \$1000. The Federation is an educational and literary non-profit organization consisting of official state poetry organizations. Contest prizes are awarded in June at the annual convention, held this year in Mankato, Minn. A brochure containing details and rules is available by sending a self-addressed, stamped envelope to Alice Briley, 1121 Major Ave. NW, Albuquerque, NM 87107.

Back to the Basics: Lifestyles Of Human Ancestors



Were the Cro-Magnons of the relatively recent Ice Age "brutish creatures living in a bestial world" or "gentle creatures primarily concerned with provisioning their families"?

Popular interpretation tends to vacillate between those two views of modern man, *Homo sapiens*, who was already much like people are today.

But as scientific methods gain favor in the reconstruction of ancient lifestyles, paleoanthropologists such as Lewis Binford, Professor of Anthropology at UNM, can dig even deeper into human history. The result is a glimpse into ancient strategies for survival.

Binford has already unearthed some ancestral habits of *Homo erectus* (100,000 to 200,000 years ago) and even *Homo australopithecus* (1/2 million years ago). Binford's method is to infer behavior (such as scavenging, foraging, and hunting) by examining bones at ancient sites around the world. And his style is to question intensely without patching in answers where there aren't any.

On Jan. 8, Binford will give a talk (part of the Community Focus series) at noon, at the Tech Transfer Center, on "The Origins of Early Man." He will discuss how a new phase of research that started in the late 50s is changing the nature of the study of human ancestry from a "humanistic" endeavor to a scientific one.

Binford is well-known for his original, challenging theories — and for being a good speaker. He has an MA and a PhD in anthropology from the University of Michigan. The Royal Anthropological Institute of Great Britain and Ireland elected him this year as its Huxley Memorial Medalist and Lecturer. Two years ago he was appointed Distinguished Leslie Spier Professor of Anthropology at UNM, to which he came in 1968. He received the Distinguished Fulbright Professor Award (Yugoslavia) in 1983-84.

Controversy Brewing

"I will speak about both the past views and the new and exciting work currently being done in our search for an understanding of our evolutionary past," writes Binford.

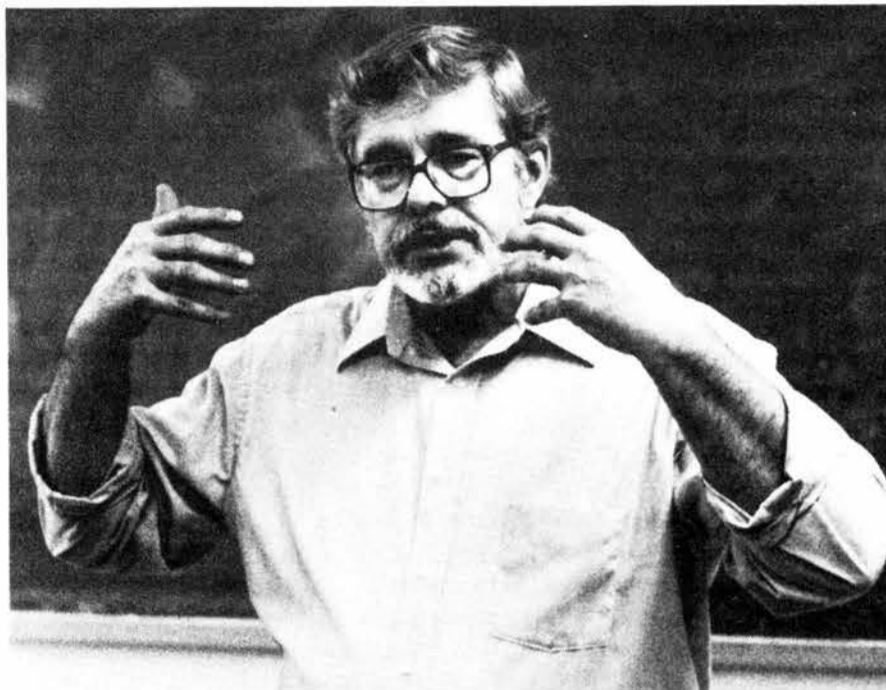
Since 1959, "discoveries of new sites of ancient men have been reported at an accelerating rate," he continues. "For the first time there is considerable argument in the field of paleoanthropology regarding the significance of the observations made and the discoveries reported, the solution to which could bring forth new and exciting views of the past, as well as of the character of our ancient ancestors."

Related Exhibit

An exhibit, "Dark Caves, Bright Visions: Life in Ice Age Europe," touching upon this area — and style — of inquiry has just opened in New York at the American Museum of Natural History. It presents the largest collection of original artifacts — tools, weapons, musical instruments, body ornaments, and art objects — from the Upper Paleolithic era (35,000 to 10,000 years ago) ever displayed in the U.S.

The artifacts were heralded in the October issue of *Smithsonian* magazine as "a burst of technology that signaled the European debut of modern humans." The article also cites the work of Binford and a colleague from UNM, Erik Trinkaus, as a powerful interpretative tool.

Few Sandians will have a chance to get to New York for the exhibit. But Binford will be illustrating his talk with slides — on a much earlier period that only culminates in the Ice Age — taken during his just-completed research sabbatical in China, India, Africa, and Europe. Seeing them is the next best thing to being there. ●ID



ANTHROPOLOGIST LEWIS BINFORD practices what he preaches. *Smithsonian* reports that he recently spent months among the Inuits in Alaska's Brooks Range, enduring a severe blizzard and joining them in search of meat on the hoof. (Photo by Jeff Alexander)

First HealthNet NM Campaign Set

You're Invited to 'Eat Right, New Mexico'

by Kate Brennan (3330)

"HealthNet New Mexico is not an effort to help yuppies get fitter." —Senator Jeff Bingaman

Next month, HealthNet New Mexico kicks off a 10-year health promotion campaign intended to enhance the health of *all* New Mexicans, according to its founder, Jeff Bingaman. A nonprofit corporation, HealthNet New Mexico will encourage improvements in nutrition and physical activity and reduction in tobacco use.

HealthNet New Mexico will conduct three behavior change campaigns a year: Eat Right New Mexico from January through March; Get Fit New Mexico from May through July; and Tobacco-Free New Mexico from September through November.

The first 10-week "Eat Right New Mexico" effort, which begins its statewide campaign the week of Jan. 12-18, aims to improve nutrition and promote weight loss, with a recommended weight loss of five pounds in the 10 weeks.

Sandians and their spouses can register for the program at the Sandia Assessment Center (Bldg. T-13, south of Medical) between 7:45 and 10:45 any workday Jan. 12 through 18. Each one will sign up, weigh in, pay a \$5 registration fee (checks please), and pick up an Eat Right kit, a step-by-step behavior change handbook modeled after Stanford University's Heart Disease Prevention Program health education materials. It offers guidelines for weight loss through good eating and exercise habits. (Participation in Sandia's TLC program is not necessary.)

Need incentives? First of all, no class attendance is necessary. And each participant who stays in the program through the week of March 23-29 gets an Eat Right New Mexico T-shirt; those who weigh out with a loss of at least five pounds get a pin too.

(Non-Sandians can join the Eat Right NM campaign at any Smith's grocery store in Albuquerque. Sign-up dates are the same: the times are 9 to 11 a.m. or 3 to 7 p.m.)

For more information, call me on 6-5880 or Susan Harris (3330) on 4-0713.

Fun & Games

Dancing — The "Golden Girls Cloggers" invites anyone interested in clogging or learning to clog to join them Monday and Wednesday evenings. Ages range from an enthusiastic 76 years on down. Anyone interested in participating can contact Ginny Hill (3152) or Jean Alcott on 291-8929.

The Golden Girls are hosting a "Clogging Snow Flake Festival" at the Wyoming Terrace Mobile Home Park (Wyoming and Zuni) on Jan. 10 from 7:30 to 10 p.m. Cloggers of all levels are invited to attend. Doris and Dennis (2121) Huffman will be cuing the evening of clogging fun.

* * *

The American Lung Association of New Mexico and 77 KKOB have announced the 4th annual Ski Privilege Card. For a \$15 contribution, you receive six complimentary lift tickets donated by Angel Fire, Red River, Rio Costilla, Sipapu, Sugarite, and Cloudcroft. That's more than \$100 worth of lift tickets, so the card makes a great stocking stuffer. All the money raised goes to the Lung Association. More info on 265-0732.

Congratulations

To Rhoda (3141) and Bennie (2858) Yazza, a daughter, Stacie Marie, Oct. 23.

To Linda Garcia (155) and Gilbert Benavides (2543), married in Albuquerque, Nov. 22.

To Lori and Bill Mills-Curran (1524), a daughter, Kathleen Anne, Nov. 23.

To Joyce (7475) and David (7472) Zamora, a son, Zachary Akira, Nov. 26.

To Annette and Steve Hatch (5160), a daughter, Ellen, Dec. 2.

Sympathy

To Ted (7540), Allen (7132), and Hugh (6321) Church on the death of their mother, Peggy Pond Church, in Santa Fe, Oct. 24.

To Donna Coulter (153) on the death of her mother in Albuquerque, Nov. 11.

To Ray Harrigan (1411) on the death of his father in Albuquerque, Nov. 21.

To Catherine Gonzales (153) on the death of her father in Albuquerque, Nov. 21.

To Paula Stronach (5142) on the death of her brother, and to Tonimarie Stronach (3151) and Steven Stronach (7555) on the death of their uncle in Albuquerque, Nov. 27.

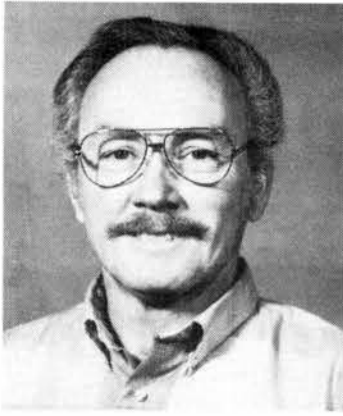
To Elizabeth Lee Frost (7223) on the death of her brother, Austin Frost, in League City, Texas, Nov. 29.

To Ken Bell (7541) on the death of his daughter in Albuquerque, Dec. 6.

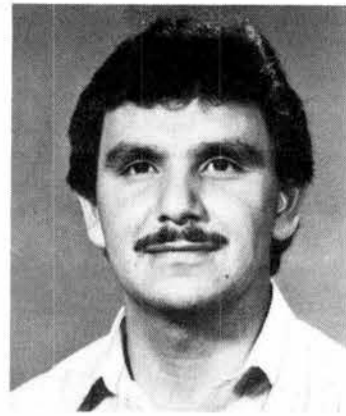
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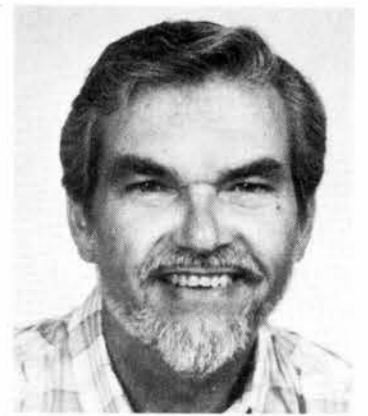
DECEMBER 1986



Lloyd Faucett (1617) 30



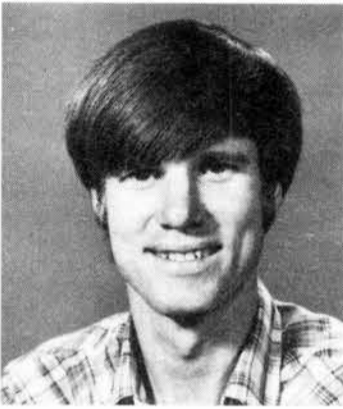
Abenicio Sanchez (7522) 10



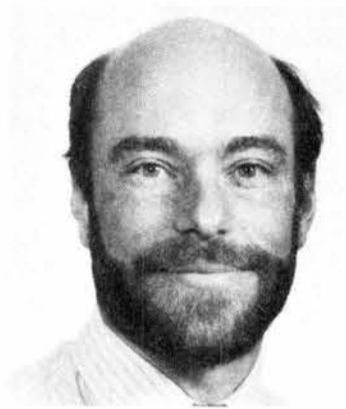
Don Veca (8255) 20



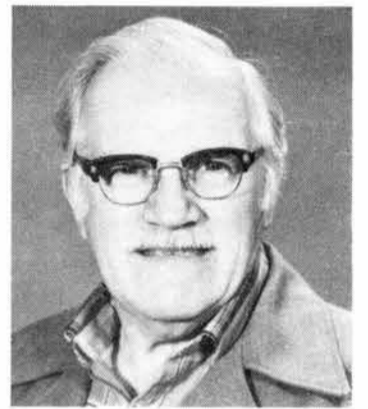
Connie Souza (3141) 20



Clifford Sharp (7552) 10



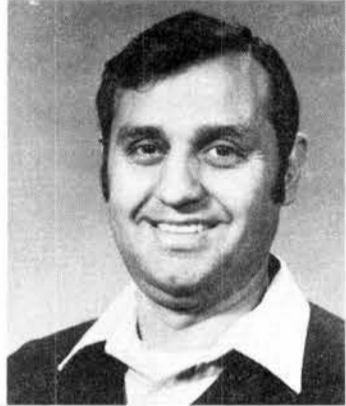
Rick Stulen (8343) 10



Leo Reynolds (7212) 35



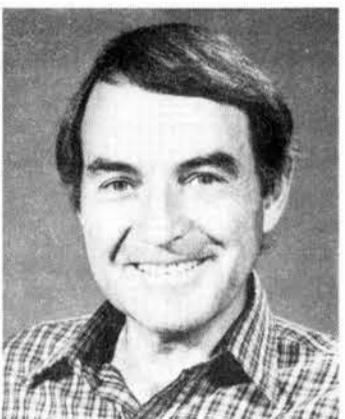
Diane Atwood (8471) 15



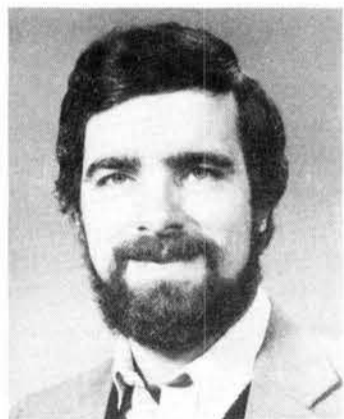
Lalit Chhabildas (1534) 10



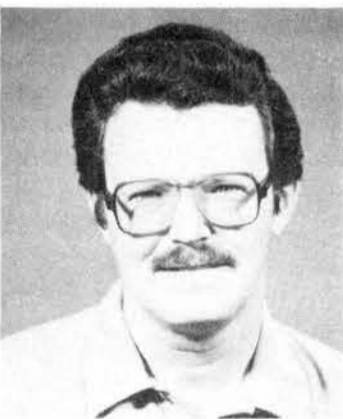
Chuck Sage (8176) 25



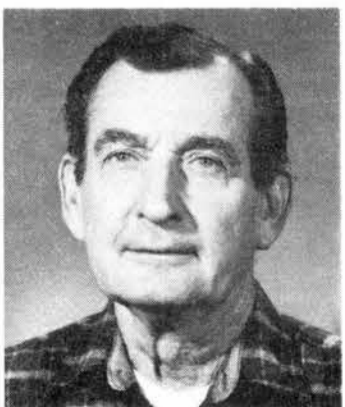
Dick Baughman (1144) 25



Gary Kellogg (1134) 10



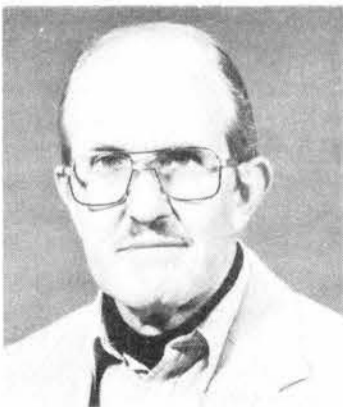
Stephen Stronach (7555) 15



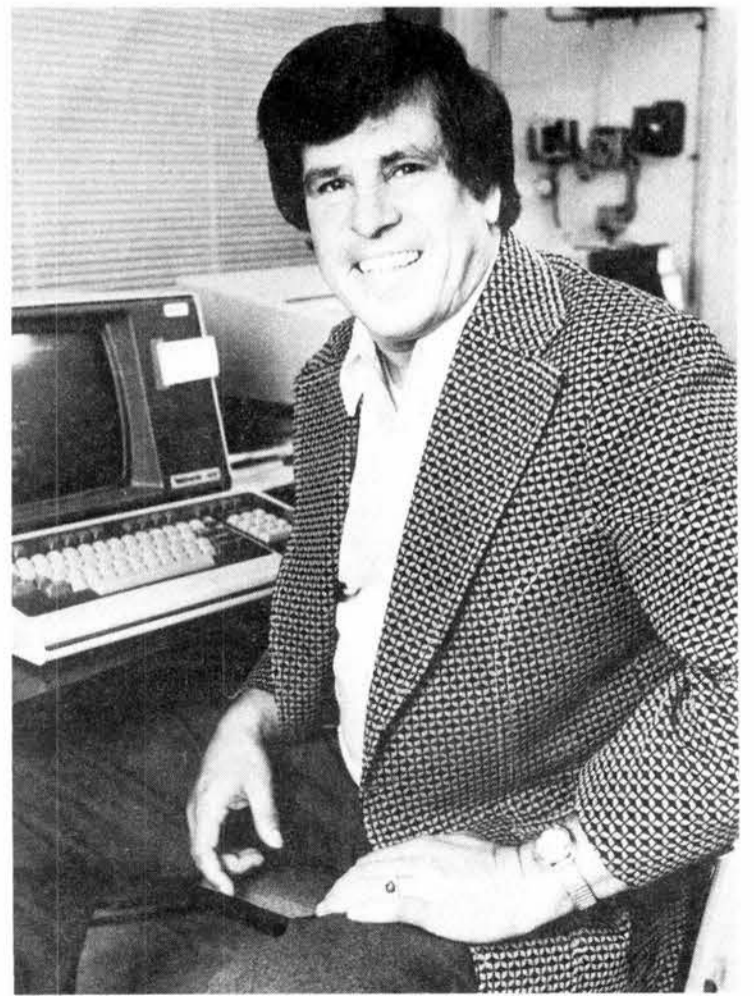
Victor Whallon (7818) 10



Al West (8431) 15



Bob Woods (9223) 20



Leo Chavez (3413) 30

Christmas Spirits Abound at Close-Down Party

IN A HOLIDAY MOOD is what everybody is at the C-Club's close-down party, set for Dec. 24 from noon-6 p.m. in the main lounge. Toast all your friends with your favorite libation served up by Joe, king of the bartenders. Extra Christmas bonus: free munchies served all afternoon. The Club closes from Dec. 25 through Jan. 1 — with the exception of the big New Year's Eve bash — so this is your last chance of the year to loosen up in the lounge.

MANAGER SAL SALAS RELENTS — Because of unprecedented demand, he agrees to serve up one more Sunday brunch in December. It's this Sunday, Dec. 21, from 10 a.m.-2 p.m. (note the extended hours for you last-minute shoppers). Featured at the bountiful buffet are ham, sausage, baron of beef, scrambled eggs, hash browns, that world-famous green chile, salad bar, and more. The price is easy on the pocketbook, too: just \$4.95, and kids under 12 eat for half price. Thanks, Sal, for this very nice Christmas present . . . and yes, we'll all remember to call in our reservations (265-6791).

THOSE POOR BOYS from Isleta take center stage following 1987's first two-for-one dinner special on Friday night, Jan. 2. Start out the evening with some scrumptious supping; you get a choice of prime rib or scallops — two entrees for a measly \$14.95. You won't be caught flat-footed later if you take advantage of the country/western dance lessons from 7:30-8:30. Then show off your sagebrush shuffle skills from 8:30-12:30. What a great way to kick off the new year!

And, speaking of the Poor Boys, don't forget they're making the happy music at the Club tonight, too, right after the two-for-one special (prime rib and snow crab).

MARK YOUR CALENDAR right now for a couple of other two-for-one specials coming up between now and the next time LAB NEWS goes to press on Jan. 16. On Jan. 9 it's filet mignon and snow crab on the menu, with Freddie Chavez and his outstanding group of musicians providing tunes with a Latin beat. On the 16th you have your choice of filet mignon or poached halibut; afterward, those popular Isleta Poor Boys serve up c/w dance music from 8-midnight. Now don't say you haven't been warned in advance. Reservations recommended.

SPOTS BEFORE YOUR EYES? Not really . . . it's just all those canines (dog stars, maybe?) featured in the movie at the next Family Night on Saturday, Jan. 10. That's right — "101 Dalmations" lights up the big screen that night starting at 6 p.m. A buffet featuring pizza, hot dogs, and all that good stuff gets the action going at 5. A special treat's in store for the kids from 5:30-6, when Professor Flora amazes and delights with a magic show that you won't believe. Party goers also can watch the professor fashion those delightful balloon animals for which he's so famous. The red carpet's out for this one — all Sandians and DOEans are invited, C-Club members or not. Bring out the whole family for one heck of a good time.

NOW'S THE TIME to think spring and summer . . . and tennis! Coronado Tennis Club passes for 1987 are now available at the recreation office. Fees — unchanged from 1986 — are for the calendar year, and are not prorated. An individual pays \$35, while couples and families of three pay \$50 and \$60, respectively. Each additional family member adds \$5 to the bill. For not very much money you buy a lot of fun and the chance to hone your tennis skills at one of the finest facilities in Albuquerque.

ALWAYS ON THURSDAY: That's the motto of the T-Bird card sharks. And well it should be — the crowds have really picked up since this ever-sensible bunch of folks decided to change the shuffle-and-deal sessions from morbid Mondays to thrilling Thurs-

days. According to Hoyle (who he?), red-letter days for the sharks next month are Jan. 8 and Jan. 22. They go for those aces starting at 10:30 a.m. both days.

THE SUNDAY BRUNCH BUNCH gets back in sync next month on Jan. 18 and Jan. 25. Same time — 10 a.m.-2 p.m., same station. However, inflation marches on, so you'll see a bit of a price increase in 1987 — to \$5.95 (kids half price). Even so, it's still the best buy in town; if you don't think so, just check out the brunch ads in your Sunday newspaper.

FORGET YOUR TROUBLES, COME ON, GET HAPPY — and the way to do it is to sign up for some tremendous trip opportunities, courtesy of the C-Club Travel Committee. How about these for attention-grabbers:

Call of the Yukon — A blockbuster cruise/land trip to Alaska is on the schedule for Sept. 8-20, or, if you opt for the cruise package only, Sept. 13-20. To begin with, you fly to Anchorage and, if you've opted for the whole nine yards — the cruise/land package — you'll spend five extra days doing all sorts of wild and wonderful things: city tour of Anchorage; a ride on the McKinley Explorer train to Denali, which is your headquarters while you explore Mt. McKinley National Park; and a tour of Fairbanks and environs, with an inland cruise thrown in. Then it's back to Anchorage, where the cruise-only types meet you to travel over to Whittier, where you'll board the magnificent M/V Regent Sea — a regal ship if there ever was one! You'll cruise for a solid week and see things you can talk about for years: College Fjord, Columbia Glacier (the most active tidewater glacier in North America), Yakutat Bay (where impressive five-mile-wide Hubbard Glacier's located). Ports of call include Juneau, Alaska's capital; Ketchikan, with its park full of totem poles; and Skagway, jumping-off point for the Klondike Gold Rush. Your last stop is Vancouver, where you'll catch a plane for Albq. Prices begin as low as \$1442/person (double occupancy) for the cruise package only; \$2125 for the cruise/land deal. Prices are guaranteed if you plunk down a \$200 deposit by Jan. 31; final payment due by July 20. The cruise/land option includes all transportation and transfers, baggage handling, all meals on the cruise, lodging accommodations along the way, and taxes/tips. Get the Alaska low-down at a travel/video presentation on Jan. 5 in the Eldorado room at 7 p.m.

Remember the Alamo — You'll see it and a whole lot more if you sign up for the San Antonio trip, set for March 15-18. If you've never seen a river dyed green, here's your chance; that's what those crazy Texans do to the San Antonio River on St. Pat-

rick's Day! Headquarters for this trip is the Menger Hotel, right next door to the Alamo and not far from the Riverwalk area. There's a full day of sightseeing planned in SA, and you'll visit places such as the San Fernando Cathedral, Mission San Jose, the Lone Star Brewery and its museum, and the SAS Shoe Factory. Another day you'll travel into the Texas hill country, with stops at Johnson City, the LBJ Ranch in Stonewall, Fredericksburg, and Kerrville (where you'll eat lunch at the Inn of the Hills). For \$421/person, you get RT air fare, three nights' lodging, one dinner and two lunches, and all of the above.

OD on History — In Washington, D.C., and Virginia, April 4-11. The Cherry Blossom Festival's in full swing at that time, and visits to the White House, Bureau of Engraving, Capitol Hill, and the Smithsonian are planned. Over in Virginia, you'll see Mount Vernon, Monticello, Williamsburg (where your Patriot's Pass buys you admission to everything), the Bull Run Battlefield Monument, Yorktown, Jamestown (and its Festival Park). The tab of \$777/person covers all of the above, plus RT air fare, charter bus, seven nights' lodging, and some special meals — including lunch at the famous Michie Tavern in Charlottesville.

Fun and Gaming — Is what you're in for when you sign up to go to Laughlin (Nev.) in February. Join the happy wanderers from Feb. 20-22 for three action-packed days at Las Vegas South. If you can stand to tear yourself away from Laughlin's gaming tables, R&R tours of Lake Mohave and Davis Dam are also available. The price tag of \$105/person includes two nights' lodging at the Riverside Hotel, round-trip charter bus fare, continental breakfast the day you start out (other meals as well), and snacks and drinks along the way. This one's a deal-and-a-half; but hurry — it's filling fast.

Welcome

Albuquerque

Geraldine Albright (22-2)
William Edgar (3426)
Donna Filip (21-1)
Carol Herrera (22-2)
Susan Homer (22-2)
Cathie Sanchez (3742)
Yolanda Smith (22-2)
Etta Tsosie (3426)
Brenda Welton (22-2)
Teresa Zarick (3742)

Colorado

Timothy Meeks (2826)

New Mexico

Roberto Gutierrez (3426)



THIS SMILING GROUP is in charge of a half-day workshop on Jan. 13 for Sandians interested in serving as board members of nonprofit agencies, but who aren't sure what their duties would be. VIA coordinator Karen Shane (3163, third from left) organized the session, "How to Become an Effective Board Member." Instructors are (from left) Marilyn Perryman, executive director of the Volunteer Center of Albuquerque; John Cantwell (20/30), who's served as a volunteer in many community organizations, and is currently finishing a six-year stretch on the APS board; and Vicki Macaulay, former chairman of training for the Junior League of Albuquerque. The workshop's open to all employees, staff level and above; it will be videotaped for future use by VIA. More info from Karen on 4-3268.